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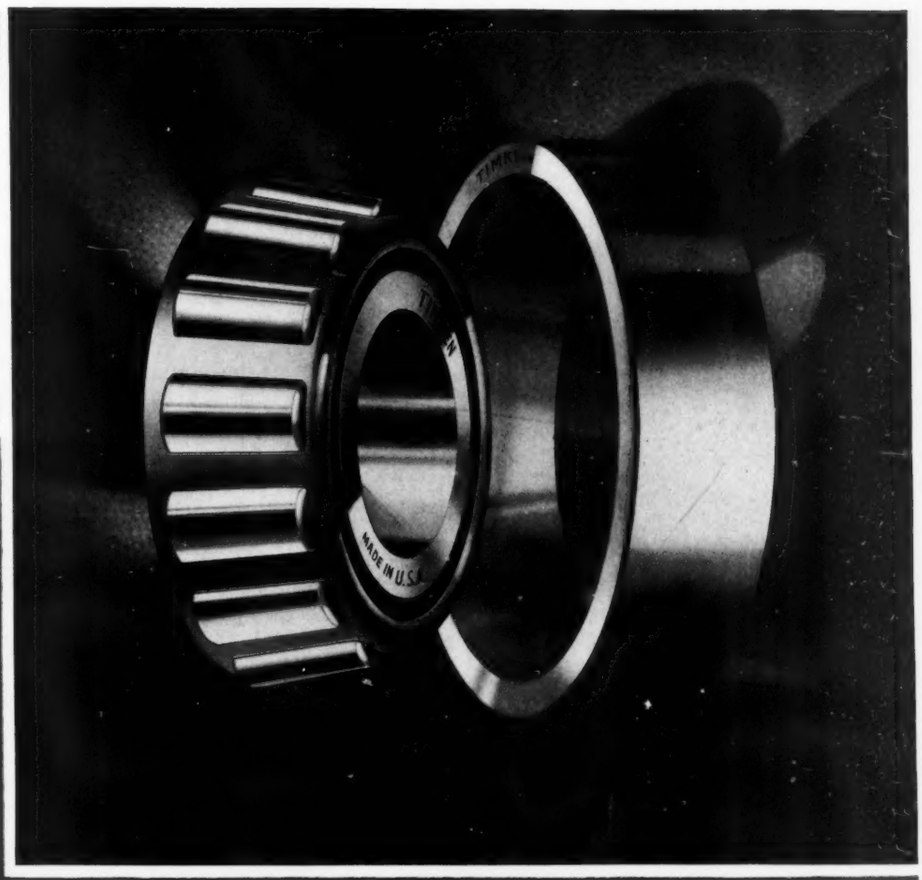

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THE OIL AND GAS JOURNAL

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January

17-18—Minneapolis, Minn., Northwest Petroleum Association, Minnesota division, West Hotel.

February

5-6—Des Moines, Iowa, Iowa Petroleum Association, Hotel Fort Des Moines.

7-8—Huron, S. D., South Dakota Oil Men's Association, Marvin Hughitt Hotel.

7-8—Louisville, Ky., Kentucky Petroleum Marketers Association.

12-14—Columbus, Ohio, Ohio Petroleum Marketers Association, annual dinner, Deshler-Wallick Hotel.

18-21—New York, Petroleum Division, A.I.M.E. (A.I.M.E. annual meeting).

March

21-23—Wichita, Kans., American Association of Petroleum Geologists, annual meeting.

April

8-13—Houston, Tex., Oil Equipment and Engineering Exposition.

11-13—Dallas, Tex., Petroleum Industry Electrical Association, Baker Hotel.

22—New York American Chemical Society, semiannual meeting.

(?)—Wichita, Kans., Kansas Oil Men's Association.

May

1-3—Tulsa, Natural Gasoline Association of America, Tulsa Hotel.

14-16—Tulsa, American Petroleum Institute, fifth mid-year meeting, Mayo Hotel.

June

20-21—State College, Pa., Pennsylvania Grade Crude Oil Association, annual meeting.

24-28—Detroit, Mich., American Society for Testing Materials, annual meeting, Book Cadillac Hotel.

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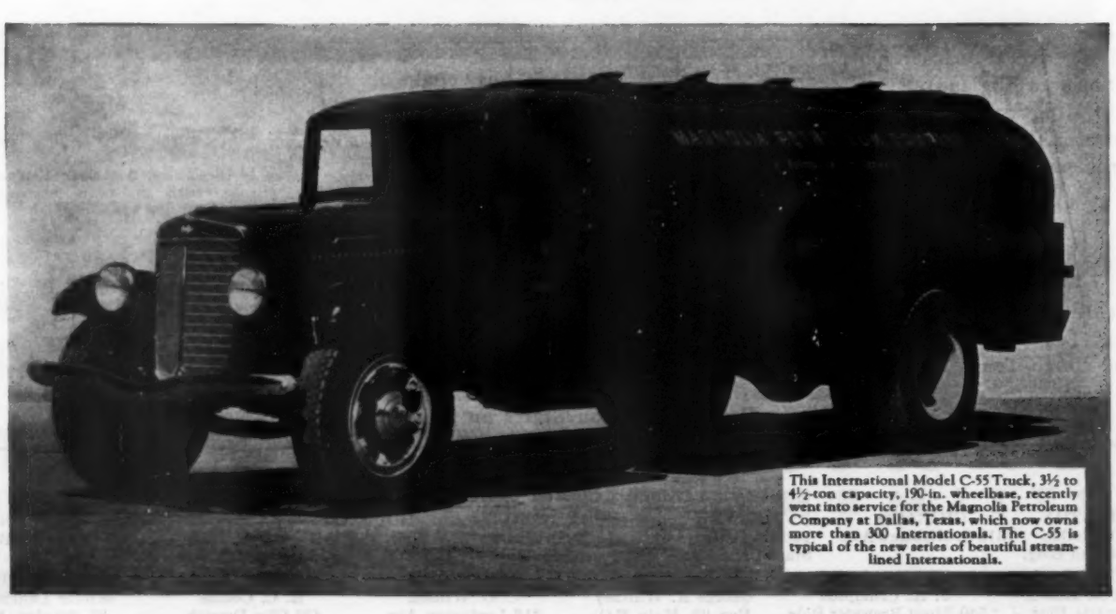

This International Model C-55 Truck, 3½ to 4½-ton capacity, 190-in. wheelbase, recently went into service for the Magnolia Petroleum Company at Dallas, Texas, which now owns more than 300 Internationals. The C-55 is typical of the new series of beautiful streamlined Internationals.

Taking Potentials in Oklahoma Responsible for Large Part of Big Gain in Crude Production

By ANDREW M. ROWLEY

TAKING potentials in Oklahoma coupled with the long established practice of many operators of producing the bulk of their allowables for the month early in the month resulted in that state registering an increase of 106,000 barrels daily during the past week. A gain of about 40,000 barrels in the daily average of California accounted for most of the remainder of the increase for the country as a whole.

East Texas really showed a decline in average per well production during the week as the gain of about 1,400 barrels daily would not equal the increase in allowable permitted by the putting on production of the wells completed during the period. The output of East Texas averaged only a little above its allowable as fixed by the State. On January 10 the state's allowable for the 15,590 wells in the field on that date was 425,447 barrels.

Despite the completion of a number of large producers during the week in Oklahoma, especially in the Fitts Pool, production of the state as a whole is expected to register a decline this week. However, potentials still are being taken in a number of pools and this fact may hold up the output.

The situation in California during the past week was somewhat complicated by the announcement of one company it no longer would curtail its production in line with recommendations made by the state umpire. The company went further when it reduced its gasoline prices two cents a gallon.

While improvement has been shown in the refined oil market and prices are somewhat stronger, refiners are watching the crude oil production situation closely and further strengthening of gasoline prices is dependent largely on success of efforts to prevent shipment of hot oil and gasoline from East Texas and on a continuation of success in other areas in maintaining a balance between crude oil production and consumer requirements.

Consumption of gasoline is being maintained at peak levels and, with stocks of refined oils at conservative levels, all indications point to a continued steady improvement as long as crude oil production is held within allowables based on consumer demand. This factor assumes greater importance in view of the reported position of large refiners they cannot afford to support a crude oil price structure which is out of line with gasoline prices, such as was the case for quite a period last year. This, of course, goes back to the old argument that crude oil prices are not and have not been too high but gasoline prices have been too low. But success in maintaining the proper balance between production and demand has paved the way for greater improvement in both branches of the business.

Crude Oil Production in the United States

Estimated daily average production for the week ending January 12, a comparison with previous week and the federal allowables follow:

		Federal allowable	
Oklahoma—	Jan. 12	January	Jan. 5
Oklahoma City	188,225	.....	110,675
Seminole-St. Louis	89,400	.....	66,925
Remainder of state	235,550	.....	229,400
Total Oklahoma	513,175	489,300	407,000
East Texas—			
Lathrop	153,544	.....	154,720
Kilgore	146,718	.....	145,549
Joiner	132,678	.....	131,258
Total East Texas	432,940	.....	431,527
West Texas	148,913	.....	148,874
North Central Texas	90,165	.....	90,645
Texas Panhandle	57,404	.....	55,926
East Central Texas	52,028	.....	51,720
Gulf Coast—Texas	173,786	.....	173,595
Southwest Texas	56,991	.....	55,398
Total State of Texas	1,012,227	1,006,800	1,007,695
Kansas	137,750	137,100	137,550
North Louisiana	23,855	.....	24,025
Gulf Coast—Louisiana	84,500	.....	84,407
Total Louisiana	108,355	99,700	108,432
Arkansas	30,935	31,000	33,595
Eastern Fields (except Michigan)	104,000	96,100	101,000
Michigan	31,154	28,100	28,543
Rocky Mountain area	96,660	98,300	93,640
California—			
Santa Fe Springs	40,900	.....	38,000
Long Beach	66,000	.....	56,750
Mountain View	15,750	.....	12,500
Elwood	9,750	.....	9,250
Kettleman Hills	58,500	.....	63,500
Remainder of State	316,900	.....	288,000
Total California	507,800	473,900	468,000
Total United States	2,542,056	2,460,300	2,385,445

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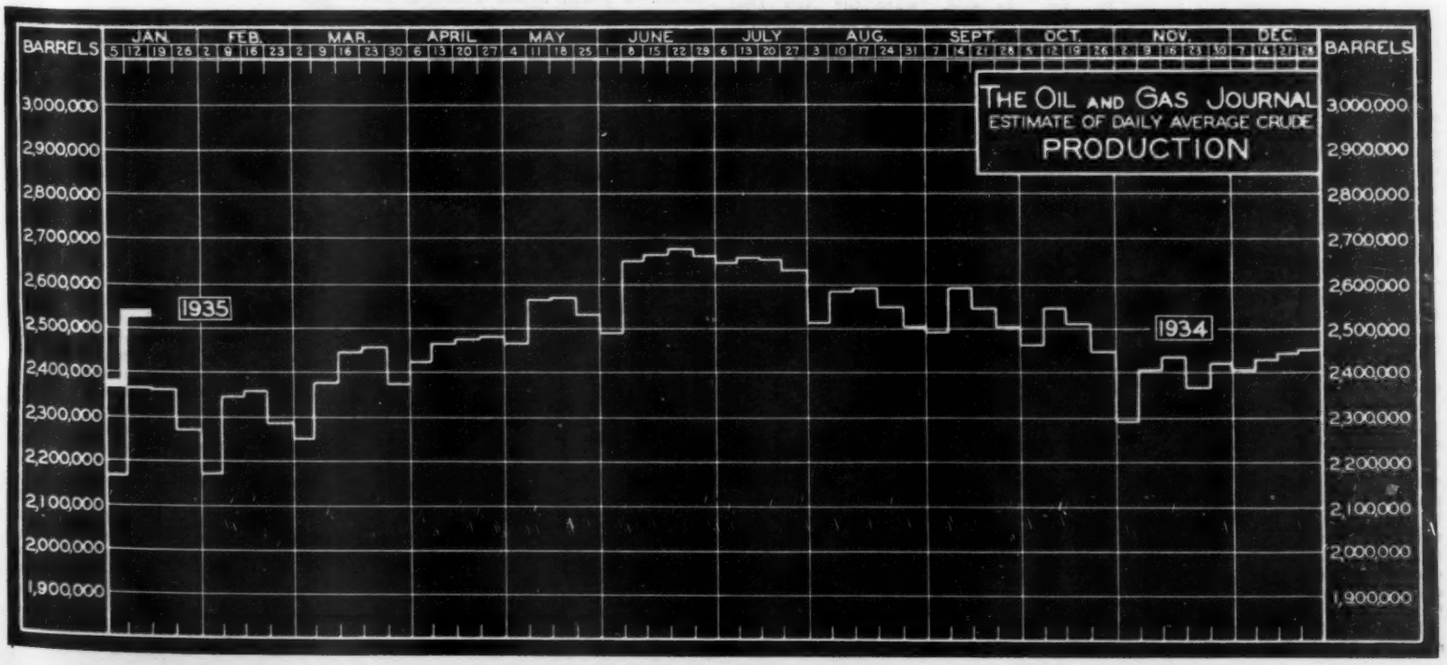


Prompt Action by Texas Strengthens Opposition to Federal Oil Control

By HUGH D. MALLON
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Jan. 14.—The past week in Washington has seen oil again take the center of the stage as a topic of discussion. President Roosevelt has discussed the subject publicly, Senators Connally of Texas and Gore of Oklahoma, have introduced legislative measures on the subject, as has Representative Disney of Oklahoma. Extended comment on the subject has also been forthcoming from the oil administrator, and various others in public life. However, with the third eventually named by the Cole oil investigating committee out of the way, the Mineral Resources Report of the National Resources Board, which upheld the conclusions reached in the report submitted by the investigating committee, it is being predicted freely that the only oil legislation which will be passed by Congress at this session will be the enactment of a measure giving the federal Government control over interstate and foreign shipments of oil produced in violation of any state law, or of any regulation or order issued pursuant to such law. This statute would return to the federal Government that authority which it was intended it should have under the terms of Section 9(c) of the National Industrial Recovery Act, but which the U. S. Supreme Court declared was unconstitutional.

Legislation of this type, it is understood, has the approval of almost all members of the industry and has been passed upon by several members of Congress. Senator Gore introduced into the Senate a measure which would amend Section 9(c) of the recovery act and in a constitutional manner give the federal Government control over the interstate and foreign shipments of oil. This amendment would be in force only as long as the act is in force, or until June 16, when it expires by law.

Permanent Legislation

Senator Connally introduced a measure along similar lines which would place permanently in the hands of the Government such authority. His proposal specifically sets out what is hot oil, and limits the authority of the President to control shipments in interstate and foreign commerce in accordance with the decision of the Supreme Court. Legal authorities have stated that both of these proposals are entirely constitutional and a legal delegation of power and authority to the President, or whatever agency he delegates to carry out the terms of its provisions.

Representative Disney introduced into the House of Representatives a bill similar to Senator Connally's which authorizes the President to enforce the provisions of the act and to prescribe such rules and regulations as might be necessary or appropriate to carry out the purposes of this act. He is also given authority to set up such boards or agencies as might be necessary, require such reports and statements under oath from producers, refiners, and transportation agencies as may be necessary to effectuate the purposes of this act.

President Roosevelt, when asked for an opinion on the Supreme Court's ruling invalidating Section 9(c) asserted that the country is definitely headed for control of oil through enactment of legislation clearer then that which was set aside by the Supreme Court. The decision was interpreted by Mr. Roosevelt as being decided more on a matter of the language used in the law, and there was no doubt left after his statements, that the administration intends to correct this, and other errors which may have been made in the promulgation of emergency laws, by the enactment of new legislation more carefully drawn.

President Illustrates Point

Mr. Roosevelt illustrated his feeling in the matter with the following parable:

"An upstate New York village had suffered many deaths at a highway crossing. The local elders, wanting to employ a constable, conferred with legal authorities and were advised the town council might adopt a resolution authorizing this action. This was done, a constable was employed, and traffic lights were installed.

"All went well, until 18 months later, when a motorist was arrested for passing a red light. He took his case to court which held that the resolution was badly drawn, was in fact, illegal.

"Nevertheless, the village had prevented deaths for a year and a half by this illegal action, and had learned, by virtue of the court's decision, how to draft a resolution correctly. A new valid resolution was adopted, continuing the constable."

This analogy with the present legal entanglement, Mr. Roosevelt believes is the same. "In the first place conditions in the oil fields were chaotic 18 months ago," he said, "when the New Deal stepped in to raise prices and to stabilize employment." He further remarked: "In the year and a half since that time the Government has put the industry in considerable better condition."

He made it very plain that this country is headed for control of such a major necessity as oil, which would not be thwarted for long by the decision. Opinion gained from this statement was that the President was referring to control of the industry under regulations promulgated by virtue of legislation of the type of Section 9(c) in legal form.

Rayburn Against Dictator

Representative Sam Rayburn, chairman of the House Committee on Interstate and Foreign Commerce, in a speech on the floor of the House of Representatives said: "I am not going to vote for any bill which would make one man the dictator of the third largest industry in the United States." He elaborated on this after leaving the floor by saying that he did approve of regulation such as had been in force under 9(c), but that he would be against any legislation which attempted to give control of production, in any manner, to the federal Government. It is his opinion that the states have primary and exclusive jurisdiction over this natural resource, and that any interference with the states in the control of this matter is unjustified.

This statement is especially significant, since any oil bill introduced in the House will probably be referred to his committee, of which the Cole investigating committee is a subcommittee. The opinion of that subcommittee has been stated in their report submitted last week and in which it was suggested that the states be allowed to work out their own problems.

The Cole committee, after the decision of the Supreme Court said: "The decision of the U. S. Supreme Court does not preclude, or even diminish the power of the oil producing states to enforce state proration.

"The job was theirs before Section 9(c) was passed. It is theirs again, aided by the petroleum code, which still is in effect. It will be interesting to see whether the states can successfully sit on the lid, pending further action by Congress. Their success or failure, will be helpful to Congress in determining whether, and what permanent legislation it may become necessary for Congress to enact."

No Control Legislation

The attitude taken by this committee clearly shows that no action will be inaugurated by them to control the industry, and that much faith is being put by them in the statements of numerous members of the industry that interstate compacts could and would be entered into by the oil producing states.

This theory is born out by the statement of Representative Cole, after reading a copy of the natural resources committee report, submitted by the National Resources Board to the President that the report is right in line with their recommendations. This report states that interstate compacts for the conservation and stabilization of mineral industries should be encouraged by the federal Government. The Cole committee report stated that no specific action would be recommended by the committee until the Governor's conference of January 3 had demonstrated its effectiveness, the Supreme Court had handed down its decision in the Panama and Amazon cases, and the minerals report of the National Resources Board had been published.

All three of these events have now transpired and no attempts are being made by the committee to promulgate any definite recommendations on oil legislation. Representative Cole has stated that he will not take any action until he sees definitely what the result of the present efforts to promulgate an interstate compact will be. He is much pleased at the headway made so far along these lines, and feels that the states are much nearer an agreement than they ever have been before.

Ickes Wants More Power

While various substitutes for 9(c) have been introduced into Congress Administrator Ickes does not feel that the powers granted under such provisions are broad enough to form a permanent part of the federal attempt to control production. The oil administration must have wider powers if it is to control the situation he says. In his opinion it would not be necessary to declare the industry a public utility to control excess production and waste, he says. Such a result can be obtained through the co-operation of the states and the industry with the federal Government, he stated, but the federal Government would need supplementary powers beyond the provisions of the code.

When it was pointed out to him that the East Texas Field had not blown the lid off, as was freely predicted in administration circles, the administrator stated that it did not surprise him. The hot oil producers, he believes, are perfectly willing to forego the profits they could make until after adjournment of Congress. "They are willing to make any sacrifices necessary in an attempt to keep from federal legislation."

This remark was amplified somewhat, however, when the administrator conceded that the Texas Railroad Commission was making a sincere effort to keep the State under control. That the commission can continue to control the situation is doubtful, in the opinion of Administrator Ickes. Federal legislation is necessary to insure control, he said, and thinks that control legislation will be passed at this session of Congress. It is his opinion that there are more advocates of federal control in Congress now than there were last year when the Thomas-Disney bill was killed in committee, this "improved" attitude being due to the beneficial results which the Petroleum Administrative Board has shown federal regulation can achieve, the administrator continued.

Ickes Orders Survey

An impartial survey of the effect of the operations of the oil code and Section 9 (c) of the NRA on independent and small enterprises, to be made by a special committee not connected with the oil administration, was announced by Administrator Ickes. In announcing the survey, which Administrator Ickes hopes will be completed within a short time, the administrator said:

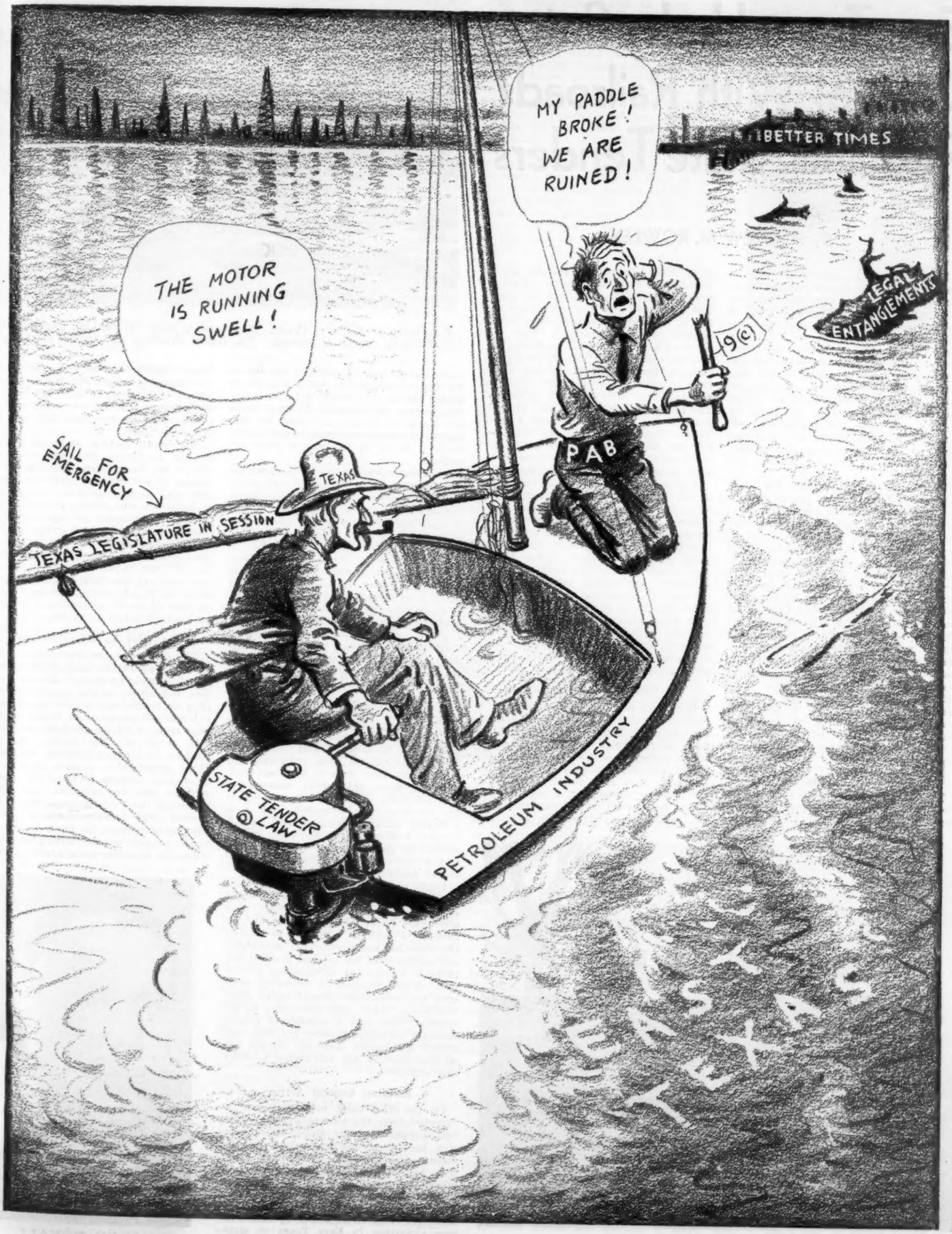
"Throughout my administration every effort has been made to protect the small, independent operator in all branches of the oil industry. There have been several complaints of late from some of the smaller operators and companies that they are being handicapped to some extent in some of their operations by the effects of the code. It appeared to me that these complaints warranted a searching and careful, but speedy, inquiry by an unbiased committee composed of competent authorities not connected with the oil administration.

"Neither the oil administrator nor the oil administration wants a 'whitewashing.' We want the facts. If the facts as collected show that independent and small enterprises are being handicapped, and where they are being handicapped, I want to know those facts and what the committee thinks may be done."

In selecting the committee, Admini-

(Continued on Page 34)

Much Ado About Nothing



—Drawn exclusively for The Oil and Gas Journal

East Texas Under Strict Control With Railroads Requiring State Tenders

By ANDREW M. ROWLEY

KILGORE, Tex., Jan. 14.—Texas is preventing shipment, both intrastate and interstate, of crude oil produced in violation of the State's allowables and of gasoline and other refined products manufactured from such crude oil. The only result of the action of the Supreme Court of the United States in declaring unconstitutional Section 9(c) of the National Industrial Recovery Act was to put every enforcement agency, officer and employe of the State of Texas on his toes and make him redouble his efforts to bottle up tightly the field and the 88 refineries there, in so far as shipments of hot oil and hot gasoline are concerned.

That these efforts succeeded far above the expectations of even the most optimistic is shown by the records on shipments during the past week. Not a tank car of gasoline or crude moved out of the field without a State Tender Board permit. The only shipments made without tender board approval were tank cars of fuel oil released by order of Federal Judge Randolph Bryant who enjoined the Texas Railroad Commission from interfering with shipment of 210,000 bbls. of fuel oil held by the Gilliland Oil Co. and sold to the Cotton Belt Railroad. This fuel oil, it was claimed, was manufactured and available for shipment prior to the date the Texas state order affecting shipments of refined products became effective December 5, last. The fuel oil cannot be sold to any other person than the Cotton Belt Railroad and is for use solely by that company in its locomtives.

Refineries Can't Ship Products

There were 20 refineries operating in the field when the Supreme Court knocked out Section 9(c). Owners of three other plants who thought the lid was off, fired up their boilers and started running crude. Their refined oil storage was soon filled and these plants are having to shut down because they cannot dispose of their products. They and other refiners and hot oil producers have been besieging their attorneys, loudly proclaiming they will have to stop operations unless they can ship the crude and gasoline. They were told: "It is too bad. The railroads won't accept any crude or gasoline for shipment without a State Tender Board order and the only way you can move anything is to get a court order enjoining the Railroad Commission from interfering with such shipment."

And F. W. Fischer, shining legal light in hot oil and gasoline court actions and who, as attorney in the Amazon and Panama cases was largely responsible for having Section 9(c) declared unconstitutional, declares emphatically the laws of Texas covering shipments (House Bill 99 and Senate Bill 21, both of which are in operation) are entirely valid and constitutional; that he does not believe any court would rule against these laws; and that these laws can prevent shipment in interstate as well as intrastate commerce of crude oil produced in excess of state allowables or gasoline or other products manufactured from such crude oil.

Tank Truck Shipments

Even shipments by tank truck have been curtailed by the enforcement agencies in East Texas. In the first place most of the small, tin can refineries, which operated on hot oil and shipped the gasoline manufactured in these plants by truck, have shut down. In addition, the highway department of the State of Texas has spread a highway patrol on all roads leading from the field and these state highway employes are checking up on tank trucks and asking about tender orders, etc. While it is not possible to stop all shipments by tank truck the quantity leaving the field is comparatively small and certainly not enough to be a factor in the market price situation.

A tank truck for hauling gasoline, photographed at Kilgore, Texas.

A refinery at Kilgore, Texas. The loading rack for fuel oil and gasoline is shown in center of picture. The liquid covering the ground is fuel oil.

All enforcement efforts in the field are being directed to controlling shipments. It was found long ago it was absolutely impossible to check production in the field because of its enormous size—about 48 miles long and from two to seven miles wide with 15,590 wells. But it was determined if the neck of the bottle-shipments was controlled, operators could not afford to pile up crude or gasoline in storage. And that theory and practice has proved successful. Whenever shipments are restricted as they are now and the railroads require tender orders before accepting products for shipment, hot oil operators and owners of the tin can refineries simply cease operations. That is what has happened.

Lid Did Not Blow Off

The lid most certainly did not blow off in East Texas despite hopeful predictions from Washington that such would be the case. If anything, enforcement is more strict than it ever has been and, what is more, this strict enforcement will continue. There is only one fly in the ointment. Unfortunately, and it is a rather difficult thing to say, but it is true and everyone interested in the welfare of the oil business should know it and act accordingly, there is a widespread doubt about court action.

Legal controversies have caused more trouble in East Texas, according to those in close touch with the situation, than any other factor. Existing laws are regarded as entirely adequate to control the situation and prevent the production and shipment of hot oil and gasoline but there is a constant nervousness on the part of all engaged in enforcing state laws and regulations issued under these laws as to "what some court may do tomorrow." The fact a number of former assistant attorneys general are now connected with cases involving alleged hot oil and gasoline has not served to clear this situation.

Attorney General Active

On the other hand, more than ever is expected from the present attorney general's department by those striving to stop hot oil production and the manufacture and shipment of products made from hot oil. The day after he assumed office last week, William McCraw, attorney general of Texas, visited the East Texas Field and pledged in no uncertain terms his every effort and co-operation to stop violations in East Texas of state laws and rules and regulations of the Texas Railroad Commission. All enforcement agencies believe Mr. McCraw means just exactly what he says and they are confident he will use every power at his command to enforce state laws and prevent violations.

Merton L. Harris, assistant attorney general of Texas, has been placed in charge of East Texas enforcement activities of the attorney general's department and he will make his headquarters at Longview and devote his entire time to matters relating to enforcement of laws and regulations affecting the East Texas Field. Mr. Harris has been on the job for nearly a week and this action by Mr. McCraw in placing one of his assistants right in the field and in charge of enforcement activities there is taken as evidence of the determination of the State to "make it tough on violators."

9(c) Has No Effect on State

The action of the Supreme Court in declaring unconstitutional Section 9(c) of the National Industrial Recovery Act does not affect in any particular Texas laws or regulations prohibiting shipment of crude oil produced in excess of state allowables or refined products made from such crude oil. Mr. Fischer was very positive in his statement to this effect. When asked why, if such is the case, he was so anxious to have that section stricken out and why he carried the matter to the U. S. Supreme Court, Mr. Fischer very frankly stated it was to save some persons he knew from going to the penitentiary for having used false affidavits in shipments of crude oil trans-

TUCKER ROYALL

ported in interstate commerce. He said before tender orders were required, affidavits could be purchased anywhere for about 20 cents each and many persons who had produced in excess of allowables, without giving the matter serious thought, simply presented affidavits which did not reflect true conditions and made their shipments in interstate commerce

The key to the whole situation in East Texas is in the fact the railroads will not accept for shipment either in intrastate or interstate commerce, any crude oil or refined products unless such proposed shipment is accompanied by an order signed by Tucker Royall, chairman of the State Tender Board. The Railroad Commission procured restraining orders from the District Court in Travis County, against all railroads, covering this point and the railroads have abided by the order and have not accepted any shipments without tender board orders

These cases, originally set for a hearing today before the district court at Austin to determine whether the restraining orders should be made permanent or dissolved, have been transferred to the federal district court and it is likely a three-judge federal court will hear the cases, hearing on which now has been set for January 28.

Oil Above Ground December 5

Some misunderstanding, or a desire to controvert the facts, prevailed in some quarters, notably Washington, on tank car shipments made from East Texas this week. As stated before, all shipments made without state tender board approval were on court orders enjoining the Railroad Commission from interfering with the shipments. These orders were based on the contention that the product to be shipped had been produced or manufactured and was above ground in some kind of storage prior to December 5 when the Railroad Commission's valid orders relating to shipments became effective.

There are 2,200,000 barrels of fuel oil, crude oil and gasoline in storage in East Texas which are said to come within this category, that is, this quantity was above ground prior to December 5 and, according to the contention of its owners, should be permitted transportation without State Tender Board orders. There is quite a sentiment in favor of the railroad commission giving approval to the shipment of all this fuel oil, crude and gasoline and clearing "the decks" of all products in East Texas over which this controversy arises. It is claimed if this quantity of 2,200,000 barrels of all products is cleared then everything in East Texas will come admittedly within the jurisdiction of the commission's orders based on the state tender law from now on. The railroad commission has a record of inventory of all the 2,200,000 barrels in question, where it is located, who owns it, etc., and it is said shipment of this oil will wipe the slate clean of all questionable oil and then every producer and refiner will be on record as starting with empty storage as of a definite date. Then it would be a simple matter to calculate what his allowable would permit him to produce and there would be no question as to whether any material in storage was legal or hot.

MERTON L. HARRIS

Do Not Trust Hot Oil Boys

On the other hand those connected with the railroad commission say they cannot trust the hot oil operators and refiners and that this 2,200,000 barrels held in storage and checked and in some cases sealed by the railroad commission is of doubtful legality and, possibly, hot oil, so why should permission be given to owners to ship it? They claim if the tanks of hot oil operators and refiners are emptied by such approved shipments, these tanks would be filled again within a very short time and then some other reason would be taken to court with the request permission be granted to ship this oil, too.

As can be seen the railroad commission has been and is being haled into court almost daily. There are hundreds of cases on file both by the commission and by operators against the commission. A number of cases against hot oil operators seem to have been "lost" somewhere as not much can be learned about their status. However, there is a movement on foot in East Texas, fostered by W. F. Weeks, East Texas counsel for the Texas Petroleum Council to have courts of inquiry delve into these matters and he is confident such courts will get action and plenty of it.

Mr. Weeks feels the court of inquiry is the best weapon the "do rights" have to stop hot oil production and the manufacture and shipment of hot gasoline. Also as a means of checking on suspicious developments relating to many matters concerning hot oil and gasoline operations and legal matters affecting such operations. A court of inquiry can be called and made effective by a local district or county attorney or by the attorney general of the state. Such a court can subpoena witnesses and take testimony and develop such information as it desires relating to any matter in which it has an interest, such as alleged bribery, etc. Royalty owners, gaugers and others can be called and their testimony taken on hot oil production. In fact, Mr. Weeks says, such a court can provide all material necessary for definite and quick court action against any persons.

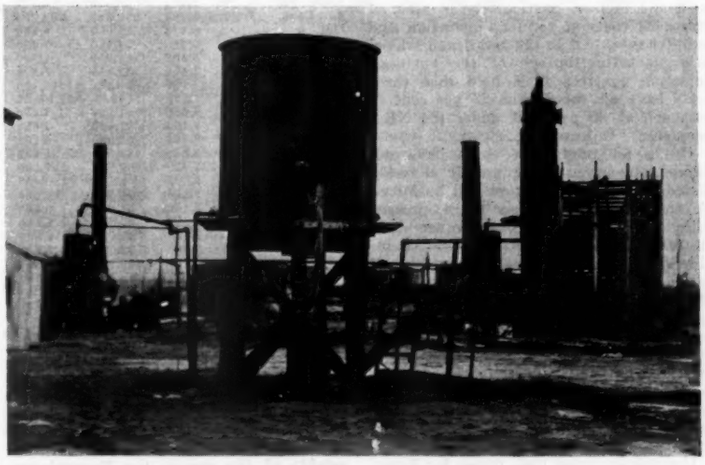
Expects More Action

Heretofore great difficulty has been experienced in getting the officials to assemble such courts of inquiry, according to Mr. Weeks. Many excuses were given as to why such courts could not be called and witnesses summoned. Mr. Weeks is confident that present officials, however, will call such courts and that facts will be developed and divulged which will have a most salutary effect upon illegal operations within the area.

Mr. Weeks said: "We have a better right to expect action from officials in Texas this year than ever before. Last year was an election campaign year with many voters contributing to campaigns of those running for office. Naturally, it is hard to get officials running for office to 'crack down' on law violators and summon courts of inquiry which probably would involve a lot of friends."

Mr. Weeks is confident the present state tender law covers interstate as well as intrastate shipments and that this law, under present conditions and since Section 9(c) has been declared unconstitutional, will stand up against any court action, at least until congress passes a valid law relating to interstate shipments. He contends as there is not a federal law now on the subject the state law cannot conflict with the rights of the federal government, and there can not be any conflict as congress has not as yet acted on the matter.

The movement for courts of inquiry and the determination of the State Tender Board and the Railroad Commission to fight through every court every action started against it and to institute action in court against all violators and violations might have the effect of slowing down this "racing into court" which has characterized East Texas since its discovery. Court actions cost money and it is common rumor throughout East Texas quite a number of the hot oil and hot gasoline operators are not as flush with money as they used to be. Some of the attorneys operating in East Texas who have enjoyed an enormous business in cases involving hot oil are now owners of producing properties in the field.



Refinery and loading rack at Kilgore, Texas.

Now Making Money

And there is another angle to the situation. One quite prominent oil man who now owns 88 producing wells and several good refineries frankly admitted that he used to produce hot oil but now he is actively on the side of those fighting violations of the Railroad Commission's rules and orders. He said he had not produced or run any hot oil since last March and he is doing everything he can now, including making cash contributions towards expenses of more enforcement men, to prevent the production of hot oil and its manufacture into gasoline.

At the present time this man has his refineries closed down. He says with crude oil at $1 a barrel he can conduct his business to better advantage to himself by selling the production from his 88 wells and not running his oil through the refineries because of the present very low price of gasoline. If gasoline prices increase to a point where refinery operations would be profitable, he will reopen his refineries and run his production through the stills and sell the gasoline.

In other words this operator is making money now on a strictly legal basis and is entirely satisfied. If crude oil prices are fair, he sells his production. If crude oil prices would drop, he would re-open his refineries.

CAPT. E. N. STANLEY

Tucker Royall, chairman of the State Tender Board and Capt. E. N. Stanley, in charge of enforcement in the field of the Railroad Commission's orders and regulations, are the spear heads of the efforts to keep East Texas bottled up tightly. Stanley has a reputation throughout the field of being one man no one can bribe or scare. He knows law and can argue cases before the courts and the hot oil boys certainly know they are up against something when Stanley goes after them.

Royall Active in Enforcement

Mr. Royall is head of the Royall National Bank of Palestine, Texas, and was drafted to the position of chairman of the State Tender Board. He has no financial interest in the oil business and is not in politics. The previous policy of having state senators or representatives go to public officials on behalf of hot oil operators, to get shipments approved, etc., does not work with Mr. Royall because he has no political obligations to pay and has not been and will not be a candidate for public office. He judges every tender application strictly on its merits and on the evidence presented to him by the applicant and by the investigators of the Railroad Commission. When he decides the oil in question has been produced in excess of state allowables he refuses to issue a tender and that oil does not move.

Mr. Royall is an unusual man for the position (which pays him about $112 a month or about enough to pay his traveling expenses back and forth between Palestine and Kilgore without regard to his time) because he is the head of a large banking business, possibly the largest in the eastern part of Texas and because he is free of political obligations and has no selfish interest in the oil business. He is intensely interested in the work and although he had expected to be relieved of his duties on January 1 as they require so much of his time, he has decided now the work is so important he will continue in the position and go through with the tender board work as long as his services are necessary.

A little of Mr. Royall's background might be interesting in connection with his present work. Anderson County, Texas, of which Palestine is the county seat, voted $3,000,000 for new roads. The citizens knew that, under such cases, quite frequently much of the money would go for graft and be dissipated. At a mass meeting they drafted Mr. Royall to act as chairman of a committee to approve all expenditures of this $3,000,000 and the county commissioners were prevailed upon to agree that no money should be spent without the approval of Mr. Royall. Anderson County now claims it got a

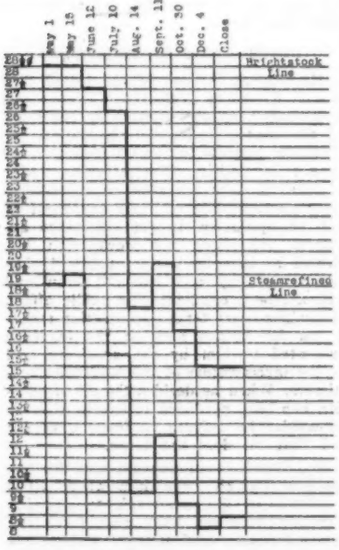
(Continued on Page 31)

Modern Methods Are Essential to Pennsylvania Grade Crude Producer

By ROBERT C. CONINE

OIL CITY, Pa., Jan. 14.—Little more than the evidence of the past year's experience is required to bring conviction that the Pennsylvania Grade crude oil producers must reduce costs by turning to water flooding, air and/or gas repressuring, and mining wherever feasible, or sell out to more progressive operators who will take advantage of every possibility in modern petroleum engineering.

A review of 1934 shows that while indicated demand for Pennsylvania Grade oil was approximately 104 per cent of production, prices moved down disregarding considerable reductions in stocks of this crude oil held aboveground, and in response entirely to unfavorable trends in the prices of refined products, particularly bright stock and steam refined.



Price trends of Pennsylvania bright stock and 600 steam refined from May 1, when grade crude oil was advanced to $2.55, through December 13, when a second 25-cent crude slash brought the price down to $2.05. The first cut was on Nov. 6

Table 1 shows daily average production, total monthly output, indicated daily demand, and crude oil prices in the six main divisions of the Pennsylvania Grade crude oil producing region. Total grade oil production in 1934 was 23,734,350 bbls., divided as follows: Bradford, 11,897,700 bbls., or 50.13 per cent; West Virginia, 4,008,750 bbls., or 16.89 per cent; Allegany, 2,862,600 bbls., or 12.06 per cent; Kane to Butler, 2,405,850 bbls., or 10.14 per cent; Southwest Pennsylvania, 960,400 bbls., or 4.05 per cent; Southeast Ohio, 1,599,050 bbls., or 6.73 per cent.

Table 2 should clear up a misapprehension relating to so-called overproduction in Pennsylvania. Part of the Bradford Field lies in New York State, and that section's output, naturally, should not be included in the Pennsylvania total, although, for convenience, Bradford Field is not divided in Table 1.

Table 3 as well as the accompanying graph, should make it clear to producers that downward price revisions in crude oil have been sufficiently motivated by economic factors, particularly in view of increased costs of refinery operation and maintenance, and in the retail and wholesale marketing branch of the business. In some quarters it is held that these costs have advanced from 25 per cent to as much as 35 per cent under the NRA auspices.

Crude oil production costs have advanced almost as much, and it is freely stated that many operators will be forced to abandon their properties if present pries, inspite of the 15-cent advance made on January 4, continue for long. An indication that unimproved stripper well holdings are more readily available on the market is the presence of many prospective buyers who have previously restricted their interests to the Bradord and Allegany water flood fields. Oil City and Titusville, particularly, are apparently becoming headquarters for scouts and agents seeking to block acreage, or, preferably, to conduct core drill tests on properties under option.

Dependence upon high prices for Pennsylvania Grade lub materials to bring cost of production plus prices from grade crude oil, has been more than a memory for years. However, many producers cling to the hope that the day of 50-cent bright stock will return, while the refiners are wondering what to do with this material. To retain a premium position for their motor oils, in the face of highly advertised new oils produced outside of the region, the Pennsylvania Grade refiners see increased processing and merchandising costs in the near future.

For the Pennsylvania Grade refiner to remain in the business with competition much keener than ever before, the price of his raw material must not present too large a handicap. The relation of production and demand to prices, indicated in Table 1, may be held to show that too much energy has been used in condemning "overproduction" of grade crude, and too little energy in modernizing production methods which will give both producers and refiners a margin of safety. Modern methods are applicable on any producing farm in the entire region where core tests indicate that sufficient oil is available to make development worth while.

Average prices paid for Pennsylvania Grade crude oils for 1934 were as follows: Bradford and Allegany, $2.4657; Kane to Butler, $2.3384 to $2.3857; Southwest, $2.1310; Eureka, $2.0810; Buckeye, $1.9771; Corning, $1.32.

ANCIENT LEASE CHANGES HANDS

BRADFORD, Pa., Jan. 12.—After operating a 150-acre lease in the Song Bird district of the Bradford Field for about 55 years, Frank Fessenmyer of this city has just sold the property for $180,000, or at the rate of $1,200 per acre. The purchasers are the family of the late A. B. Booth, pioneer operator. The Booths have an 80-acre lease adjoining their new purchase. Under the management of Edward Booth the joint property will be developed by the latest flooding methods. Notwithstanding it has been producing more than half a century the property is expected to produce more oil in the future than it has done in the past.

TABLE 1—TOTAL PRODUCTION, DAILY AVERAGES, PER CENTS OF TOTAL OUTPUT AND PRICES FOR THE PENNSYLVANIA GRADE CRUDE OIL FIELDS

Week ending	Allegany	Bradford*	Kane-Butler	S.W. Pa.	S.E. Ohio	West Va.	Daily Avg.	Indicated daily demand
Jan. 6	7,400	30,350	6,650	2,500	4,950	11,300	63,150	71,007
Jan. 13	7,600	31,450	6,900	2,600	4,300	11,500	64,350	55,634
Jan. 20	7,100	29,900	7,500	2,650	4,500	11,300	62,950	62,664
Jan. 27	7,300	31,600	6,900	2,300	4,450	11,550	64,100	77,957
1,944,350	222,400	945,600	213,200	76,850	138,850	347,450		
Prices	$2.45	$2.45	$2.32–37	$2.12	$1.92	$2.07	10/4/33	
Feb. 3	6,000	28,200	6,050	2,250	4,100	9,800	56,400	53,635
Feb. 10	7,000	29,000	5,600	2,400	3,850	10,750	58,600	76,029
Feb. 17	6,300	28,850	5,650	2,150	3,650	10,250	56,850	69,421
Feb. 24	6,900	29,450	5,550	2,000	4,050	10,650	58,650	51,365
1,604,900	185,150	808,300	154,350	61,000	110,350	285,750		
Mar. 3	6,350	28,150	4,900	2,100	4,300	8,700	54,500	76,071
Mar. 10	7,950	31,750	5,050	2,600	3,850	10,700	61,900	44,614
Mar. 17	7,350	31,100	6,800	3,100	4,700	12,150	65,200	75,629
Mar. 24	6,900	31,350	6,050	2,450	4,450	11,750	62,950	70,307
Mar. 31	7,650	32,300	6,750	2,850	4,650	11,450	65,650	73,507
1,954,350	228,000	969,950	187,250	83,300	136,400	348,450		
Apr. 7	7,750	31,800	7,650	2,600	4,800	10,650	65,250	55,679
Apr. 14	7,250	31,900	7,050	2,900	4,650	11,900	65,650	79,079
Apr. 21	7,250	33,200	6,150	2,450	4,700	11,800	65,550	83,550
Apr. 28	7,750	32,350	6,850	2,000	4,450	11,350	67,550	56,264
1,969,800	225,300	973,650	208,000	81,450	140,000	341,400		
Prices	$2.55	$2.55	$2.42–47	$2.22	$2.07	$2.17	5/1/34	
May 5	7,650	34,450	7,050	2,750	4,900	10,750	65,650	62,364
May 12	7,800	33,300	7,200	2,750	4,650	10,900	66,600	75,429
May 19	7,900	33,700	6,650	2,600	4,350	11,050	66,250	73,679
May 26	7,500	34,800	6,150	2,850	4,650	11,350	67,300	65,564
2,083,550	240,650	1,060,600	218,500	84,150	144,300	340,350		
June 2	8,000	35,150	7,600	2,600	4,850	10,700	68,900	59,757
June 9	7,550	33,800	7,350	2,750	4,250	11,450	67,150	78,293
June 16	7,500	34,000	7,100	2,600	4,400	11,750	67,350	31,064
June 23	7,700	35,200	6,850	3,000	4,550	11,500	68,600	65,743
June 30	8,150	36,700	7,350	2,850	4,650	12,050	71,750	70,321
2,061,800	232,300	1,048,200	214,350	83,650	134,650	348,650		
July 7	7,500	33,000	6,400	2,650	4,550	10,250	64,350	70,636
July 14	8,150	36,150	6,800	2,750	3,950	11,800	69,600	71,457
July 21	7,600	34,850	6,850	2,750	4,750	11,150	67,950	59,807
July 28	8,100	32,800	6,750	2,800	4,200	10,850	65,500	62,643
2,078,350	243,300	1,061,250	209,350	85,050	138,350	341,050		
Aug. 4	7,900	34,550	7,250	2,800	5,400	10,900	68,850	72,564
Aug. 11	8,150	33,300	6,300	2,550	3,800	11,000	65,100	54,100
Aug. 18	8,400	33,550	6,850	2,750	4,600	10,700	66,850	67,421
Aug. 25	8,100	32,800	6,250	2,550	3,900	11,450	65,050	73,479
2,081,900	256,250	1,048,450	208,900	84,450	135,600	348,250		
Sept. 1	8,650	35,450	7,350	3,050	4,650	12,100	71,200	64,343
Sept. 8	8,100	33,000	7,000	2,300	4,150	10,900	65,450	63,736
Sept. 15	8,650	33,650	6,600	2,800	4,050	11,450	67,200	70 200
Sept. 22	8,500	33,350	6,650	2,850	4,750	11,150	67,250	78,964
Sept. 29	8,500	33,000	6,900	3,400	4,600	11,800	68,200	70,629
2,014,500	253,300	999,500	204,200	85,250	132,200	340,050		
Oct. 6	8,400	33,050	6,800	2,750	4,700	10,850	66,550	61,836
Oct. 13	8,600	33,650	7,000	2,850	4,100	11,100	67,300	72,586
Oct. 20	8,450	32,900	6,900	2,550	4,750	11,900	67,450	66,307
Oct. 27	8,400	33,150	7,200	2,700	4,500	12,100	68,050	59,629
2,072,000	263,150	1,020,400	218,300	83,300	142,250	344,100		
Prices	$2.30	$2.30	$2.17–22	$1.97	$1.82	$1.92	11/6/34	
Nov. 3	8,650	31,050	7,450	2,650	5,150	11,100	66,050	71,050
Nov. 10	8,450	31,000	6,050	2,900	4,050	9,950	62,400	65,329
Nov. 17	8,700	33,050	6,200	2,650	4,300	10,700	65,600	60,944
Nov. 24	8,650	34,300	6,600	2,650	4,600	11,200	68,000	70,857
1,998,950	262,050	1,000,900	197,500	81,850	134,300	322,350		
Prices	$2.05	$2.05	$1.92–97	$1.72	$1.57	$1.67	12/13/34	
Dec. 1	9,250	36,550	7,200	2,750	4,700	11,100	71,550	67,693
Dec. 8	8,100	31,050	6,550	2,650	4,500	10,750	63,600	74,029
Dec. 15	9,250	32,350	5,550	2,000	3,550	10,000	62,700	66,700
Dec. 22	8,850	35,700	6,600	2,700	3,800	10,550	68,200	74,486
Dec. 29	8,300	32,950	5,550	2,200	3,450	10,100	62,550	70,407
1,870,900	250,750	960,900	176,950	69,600	111,800	300,900		
23,734,350	2,862,600	11,897,700	2,405,850	960,400	1,599,050	4,008,750		24,630,183
100	12.06	50.13	10.14	4.05	6.73	16.89		103.774%
65,383	7,886	32,776	6,627	2,646	4,405	11,043†		68,853

*Bradford Field in Pennsylvania and New York separated in Table 2. †Daily average.

TABLE 2—BRADFORD FIELD OUTPUT
(Daily Averages)

Month—	McKean County (Pa.)	Cattaraugus County (N. Y.)
January	27,806	2,697
February	26,694	2,174
March	28,548	2,741
April	30,132	2,323
May	31,686	2,527
June	32,250	2,690
July	31,276	2,958
August	31,344	2,477
September	31,127	2,190
October	30,118	2,798
November	31,081	2,282
December	28,657	2,340

TABLE 3—REFINERY PRICE TRENDS

Product—	May 1	May 15	June 12	July 10	August 14	Sept. 11	Oct. 30	Dec. 4	Year close
U. S. Motor	.05 .05¼	.05½ .05¾	.05¾ .05¾	.....	.05¾ .06	.05½ .05¾	.04¾	.04¾ .05	.04¾ .04¾
Naphtha	.04¾	.05¼	.05¾	.....	.05¾ .05½	.....	.04¾	.04¾	.04¾
45° Kerosene	.04¾ .04¾	.....	.04¾ .04¾	.04¾ .04½	.04¼ .04¾	.04½ .04¾	.04¾	.04¾	.04¾ .04¾
36-40 Fuel	.03¾ .04	.04 .04¼	.04		.03¾ .04	.03¾ .03¾	.03¾	.03¾ .03¾	.03¾ .04
Neutrals:									
(150) 0°F. pour	.25 .25½	.25½ .26	.....	.....	.22 .22½	.....	.23½ .24	.24 .24½	.24 .24½
25°F. pour	.22½ .23	.23 .23½	.....	.....	.21 .21½	.....	.21 .21½	.22 .22½	.22 .22½
(180) 25°F. pour	.26½ .27	.27 .27½	.....	.....	.24¼ .25	.....	.....	.25 .25½	.25 .25½
(200) 0°F. pour	.31½ .32	.32 .32½	.....	.....	.29½ .30	.....	.30 .30½	.30½ .31	.31 .31½
25°F. pour	.29 .29½	.29½ .30	.....	.....	.28 .30	.27½ .28	.....	.27½ .28	.28 .28½ .28 .29
Steam refined:									
600	.19 .19½	.19½ .20	.17½ .18	.16 .16½	.10 .10½	.12½ .13	.09½ .10½	.08½ .09½	.09 .10
650	.21½ .22	.22 .22½	.20 .21½	.19 .20½	.12½ .13	.15 .15½	.13 .13½	.12 .12½	.12 .13
600 flash	.22½ .23	.23 .23½	.21 .21½	.20 .20½	.13½ .14	.16 .16½	.14 .14½	.13 .13½	.13 .14
630 flash	.27 .27½	.27½ .28	.25½ .26	.24½ .25	.18 .19	.20½ .21½	.18 .18½	.17 .17½	.17 .18
Bright stocks:									
10°	.30 .30½	.....	.29 .29½	.28 .28½	.19½	.21½ .22	.20½	.19½ .20½	.19½ .20½
25°	.28½ .29	.....	.27½ .28	.26½ .27	.18	.20 .20½	.17	.15½ .16½	.15½ .16½
122-24 Wax	.0380	.0375	.0360	.....	.0290	.0300	.0325	.....	.0325

General view of Shell Petroleum Corp. new natural gasoline plant. This is the first gasoline plant to be built on the Gulf Coast in Louisiana.

New Shell Natural Gasoline Plant Processing 12,000,000 Feet Daily

By NEIL WILLIAMS

LAKE CHARLES, La., Jan. 14.—For the past five months Shell Petroleum Corp. has been operating continuously a natural gasoline plant in the Iowa Field, located on the Calcasieu-Jefferson Davis Parish line, in coastal Louisiana. This plant holds the distinction of having been the first and so far the only gasoline plant in the Gulf Coast district of Louisiana. It also is one of only eight such installations on the entire Gulf Coast extending to the Mexican border.

Although until comparatively recently coastal fields have not been considered conducive to gasoline plant operation, conditions in many of the newer fields, such as Iowa, where more consistent gas reserves are available, have been more favorable, and in the latter field the operation of the Shell plant has filled a very definite and important place in the conservation program which is being carried on.

Economy of Operation

The plant itself is of a more or less conventional type and there is nothing particularly unusual in its operation. Most of the major equipment was assembled from four or five other plants which the company dismantled in North Texas and Oklahoma. However, the plant was laid out to effect the greatest economy and efficiency in operation in view of the fact that production of gas in the field is being held to a minimum and the content of gasoline is not large.

Gas for the plant is obtained from all the leases of two of the three companies operating in the field. The volume at present totals around 12,000,000 feet daily, of which Shell leases provide around 10,000,000 feet daily and those of the Barnsdall Oil Co. about 2,000,000 feet. Magnolia Petroleum Co. is the third operator in the field, having about 4,000,000 feet of gas daily, but which is not taken by this plant.

Location of the plant is in the extreme south end of the field. The field extends a little over a mile from south to north and a little over a mile east and west. Including those of Magnolia Petroleum Co. there are approximately 30 producing wells in the field with a daily average oil output of around 16,500 bbls., or an average ratio of a little less than 1,000 feet of gas per barrel of oil.

The plant has what might be termed a dual operation with the gas from the Barnsdall and Shell leases being processed separately through two different absorption towers. Separate gas gathering systems serve the two companies. Gas from the Shell leases which is received at the plant through an 8-inch trunk line is taken at a pressure of 50 pounds and run direct to one of the two absorbers. Gas from the Barnsdall leases is received at atmospheric pressure through a 16-inch trunk line and first must be picked up by compressors which boost the pressure to the 50 pounds at which the gas enters the second absorber. There are three 225-horsepower compressors for this purpose, one, however, being a stand-by.

Taken under 50 pounds pressure from the field separators, the gas from the Shell leases has a gasoline content of from .7 to .8 gallon per 1,000 feet as additional gasoline fractions are held in solution in the separators and run to storage with the crude. Barnsdall Oil Co. has elected to permit more of the lighter ends of the crude to pass off with the gas to the gasoline plant by the lowering of the pressure so that the gas is pulled from the separators under vacuum.

At present the absorbers are being operated at a little over half capacity. At capacity 400 gallons of mineral seal oil can be circulated per minute. Of the stripped gas passing overhead from the absorbers part is returned to the leases for fuel requirements while the bulk of it is taken by the United Gas Co. into its lines. When the gasoline plant was started, the latter company laid a line from it to a point on its main Louisiana trunk system 6 miles north of the field. There a booster station also was built. Recently the company was taking a little over 8,000,000 feet of the residue gas.

The gas is being stripped to a content of less than .007 of a gallon per 1,000 feet with the B.t.u. reduced to around 1,080, which is well under the maximum of 1,100 allowed in the lines of United Gas Co.

After the stripping of the gas, the rich oil from the two absorbers is run together into a joint reabsorber, in which the pressure of 50 pounds maintained on the separators is reduced to around 40 pounds. In this operation a small amount of the lighter fractions carrying about 14 gallons per 1,000 feet are vaporized and taken off to be used as fuel under boilers in the steam generating plant.

Method of Operation

As in conventional practices the bottoms are run through heat exchangers and preheaters to the still, which in this case is a combination still and dephlegmator. There the rich oil is stripped of its gasoline fractions, which are then condensed and stabilized. The still is operated at a pressure of 30 pounds with a temperature of 350 degrees on bottom and 225 degrees overhead. A stream of gasoline is injected at the top as reflux.

In stabilization of the finished product the vapor pressure is reduced from around 30 pounds to 18 pounds with all the propane and about 50 per cent of the butane being taken off and used as fuel under boilers.

Operating conditions at Iowa are particularly favorable. The gas is sweet and desirable. An abundant good water supply is readily available both for boiler and cooling use from wells around 300 feet deep. The supply of gas, while restricted under controlled crude production, is obtainable from the various leases with a minimum amount of gathering system. The latter is due to the limited field ownership and operation and the centralized grouping of the leases. The field is easily accessible and convenient for shipment of the gasoline direct either to the Shell's refineries at Houston and Norco (near New Orleans). A loading rack is located at the town of Iowa, a little over a mile south of the field on the main line of the Southern Pacific about 12 miles east of Lake Charles.

It might be mentioned in concluding that electric power for the entire field use of the Shell Petroleum Co. is generated at the gasoline plant. The generating equipment consists of a 125 KVA generator driven by a 165-horsepower steam turbine, and a stand-by generator is powered with a gas driven engine. Steam for the turbine is supplied from the power plant which supplies the steam for operation of the gasoline plant, that containing five 112-horsepower boilers, three of which are kept in use at a time with the other two as stand-bys. The water wells are pumped with electrically driven pumps.

Three Per Cent Deduction Is Sustained by Federal District Judge Vaught

Federal Judge Edgar S. Vaught, sitting at Oklahoma City, issued a permanent injunction against the Oklahoma State Tax Commission preventing collection of taxes on the 3 per cent of gross crude oil production allowed for deductions.

The decision was given in an action filed against the commission by the Stanolind Crude Oil Purchasing Co. The case involved $48,956.08, but the decision affected the entire industry.

Judge Vaught upheld the position of the Stanolind Crude Oil Purchasing Co., joined by all other Mid-Continent purchasers, that it was the custom of the industry from the beginning of the business to pay for but 97 per cent of the oil bought, and to impose the 3 per cent deduction for losses and handling. The State Tax Commission opposed the old rule, sought to set it aside and instituted suit to collect back taxes from 1931, and which totaled $48,956.08 for that firm, but which figured on all other purchasers would have reached a figure said to be $25,000,000, had the state's position been upheld.

In his decision Judge Vaught said orders or assessments against the Stanolind Co. by the State Tax Commission in an attempt to collect the back taxes were illegal and void, and the additional gross production tax purported to be assessed against the company was erroneous and illegal, and the defendants should be permanently enjoined from seeking to avoid the orders. A previous temporary injunction was made permanent.

The state's claim for 100 per cent was that the 3 per cent deduction for dirt, sediment, and other impurities, or losses, was not correct, but expert evidence submitted by the Stanolind attorneys showed that in many instances the loss to purchasers was greater than 3 per cent.

The Stanolind company, supported by other purchasers, showed the long-existing custom of the industry in recognizing

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Domestic Gasoline Consumption 99.5 of the Demand at the Peak

By C. O. WILLSON

The domestic demand for gasoline in November established an all-time peak for that month, according to the latest report of the Bureau of Mines covering November operations. The indicated domestic demand for motor fuel during the month totaled 34,839,000 bbls., a gain of 15 per cent over November, 1933, and a gain of 10 per cent over November, 1931, the year of largest domestic gasoline consumption.

The indicated domestic consumption for the 11 months was 99.5 per cent of the demand for the same period in 1931, the year of greatest domestic gasoline requirements. Should the December report, when it becomes available, show a gain of only 8 per cent over December, 1933, a new yearly record will be established in domestic consumption of motor fuels.

The exceptional gain of 15 per cent in November, following a 14 per cent increase in October over October, 1933, will come as a surprise to many in the industry. The comparative data on domestic gasoline demand for 1934 and 1933 has shown a somewhat irregular trend and statisticians will prefer to wait until the December and yearly figures are available before arriving at any final conclusions.

Reversal of Trend

For the first seven months of 1934 the gain in domestic demand over the corresponding months of 1934 ranged from 5 to 8 per cent. This situation changed in August and September, when the demand in this country was approximately the same as in 1933. The July and August figures indicated a trend which many thought would continue over the remainder of the year, ending the increased demand for gasoline and crude oil. The October report of the Government showed a sharp reversal in this trend, which continued in November.

It is difficult to account for such a large increase in actual consumption for the two months over the same period in 1933. Car registrations do not point to large gains in motor fuel requirements nor do the reports of individual companies.

As was pointed out a month ago, domestic demand as used in this report is based on refinery shipments. Part of these shipments may be run to storage at water terminals and other bulk terminals and thus indicate a wholesale rather than a consumer demand. It will be necessary to wait at least another month before it will be possible to conclude that the shipments represent an actual gain in consumer demand.

The November and October figures have boosted the accumulative gain in gasoline demand for the first 11 months of 1934, which as shown in the accompanying table amounts to 7.8 per cent. November exports of gasoline were greater than in October but 24 per cent less than November, 1933. For the first 11 months the decrease in exports compared to same period in 1933 was 16.4 per cent. The increase in total demand (domestic demand plus exports) was 6 per cent. These demand figures, coupled with a 12 per cent reduction in stocks at the end of November, reflect a stronger statistical situation than prevailed a year ago.

The domestic demand for kerosene in November was 11 per cent greater than in October and about 16 per cent greater than November last year. This relative situation between 1934 and 1933 has been maintained consistently as indicated in the data, which show that the accumulative gain for the first 11 months was 14.2 per cent greater than in 1933. There was a large decline in kerosene exports in November and this served to decrease the accumulative increase in foreign purchases from 18.4 per cent for the 10 months to 11 per cent for the 11 months.

The data covering the entire 11 months show that the demand for fuel oil and gas oil was running ahead of 1933. This comparative situation was not as favorable as in the early months of 1934. Stocks continued to decline so that on November 30 they were 13,688,000 bbls. or 10.5 per cent less than on the same date in 1933.

Reversing the October situation, the domestic demand for lubricating oil in November decreased while the exports increased. The accumulative comparisons show little change from earlier reports with a gain of 5 per cent in total demand brought about by a gain of 10 per cent in domestic demand with a decrease of 5 per cent in exports.

Exports of wax showed a slight gain in November over October, which was more than offset with a decrease in domestic demand. Stocks again increased so that on November 30 they were 78 per cent larger than on November, 1933. The loss in total demand of 26 per cent for the first 11 months is made up of a 30 per cent decline in domestic demand and 20 per cent in exports. Production was greater in 1934 than in 1933.

Crude Stocks Decline

The November report of the government bureau substantiates earlier data which indicated a general improvement in the relative supply and demand situation. Consumption of crude oil increased over

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Crude Oil and Refinery Situation Summarized—First Eleven Months of 1934-1933

Supply and Demand—Crude Oil (Bbls.)

	Total supply	Total demand	Excess Demand	Excess Pct.	Domestic production	Imports	Indicated domestic demand‡	Exports	Stocks refinable crude Nov. 30
1934, first 11 months	864,739,000	878,968,000	14,229,000	1.6	834,335,000	30,404,000	840,272,000	38,691,000	341,165,000
1933, first 11 months	862,516,000	847,032,000	*15,484,000	*1.8	833,499,000	29,017,000	813,084,000	33,948,000	355,199,000
Increase, 1934	2,223,000	31,736,000			836,000	1,387,000	27,193,000	4,743,000	†14,034,000
Increase, 1934	0.2%	3.7%			0.1%	4.7%	3.3%	14.0%	†3.9%

Supply and Demand—Refinery Products—Motor Fuel (Bbls.)

	Total supply	Total demand	Excess Demand	Excess Pct.	Domestic production	Imports	Domestic demand	Exports	Stocks Nov. 30§
1934, first 11 months	387,104,000	398,882,000	11,778,000	3.0	387,103,000	1,000	375,752,000	23,130,000	47,516,000
1933, first 11 months	375,770,000	376,103,000	333,000	.8	375,756,000	14,000	348,431,000	27,672,000	53,977,000
Increase, 1934	11,334,000	22,779,000			11,347,000	†13,000	27,321,000	†4,542,000	†6,461,000
Increase, 1934	3.0%	6.0%			3.0%	†93%	7.8%	†16.4%	†12%
Kerosene									
1934, first 11 months	48,749,000	48,183,000	†566,000	†1.1	48,749,000		39,209,000	8,974,000	7,123,000
1933, first 11 months	44,688,000	42,424,000	†2,264,000	†5.3	44,688,000		34,333,000	8,091,000	7,297,000
Increase, 1934	4,061,000	5,759,000			4,061,000		4,876,000	883,000	†174,000
Increase, 1934	9.0%	13.6%			9.0%		14.2%	10.9%	†2.3%
Gas Oil and Fuel Oil									
1934, first 11 months	301,096,000	323,672,000	22,576,000	7.4	297,268,000	3,828,000	298,098,000	25,574,000	116,163,000
1933, first 11 months	289,532,000	303,469,000	13,937,000	4.7	283,586,000	5,946,000	285,385,000	18,084,000	129,851,000
Increase, 1934	11,564,000	20,203,000			13,682,000	†2,118,000	12,713,000	7,490,000	†13,688,000
Increase, 1934	4.0%	6.6%			4.8%	†35.6%	4.4%	41.4%	†10.5%
Lubricating Oil									
1934, first 11 months	23,999,000	24,188,000	189,000	0.7	23,999,000		17,094,000	7,094,000	6,841,000
1933, first 11 months	21,564,000	23,001,000	1,437,000	6.2	21,563,000	1,000	15,507,000	7,494,000	7,257,000
Increase, 1934	2,435,000	1,187,000			2,436,000		1,587,000	†400,000	†416,000
Increase, 1934	11.3%	5.1%			11.3%		10.2%	†5.3%	†5.7%
Petroleum Wax (Lbs.)									
1934, first 11 months	463,353,000	405,506,000	*57,847,000	*14.2	431,200,000	32,153,000	222,981,000	182,525,000	130,222,000
1933, first 11 months	456,075,000	548,551,000	92,476,000	20.4	427,840,000	28,235,000	320,272,000	228,279,000	73,079,000
Increase, 1934	7,278,000	743,045,000			3,360,000	3,918,000	†97,291,000	†45,754,000	57,143,000
Increase, 1934	1.6%	†26%			0.8%	13.8%	†30.4%	†20.0%	78.2%

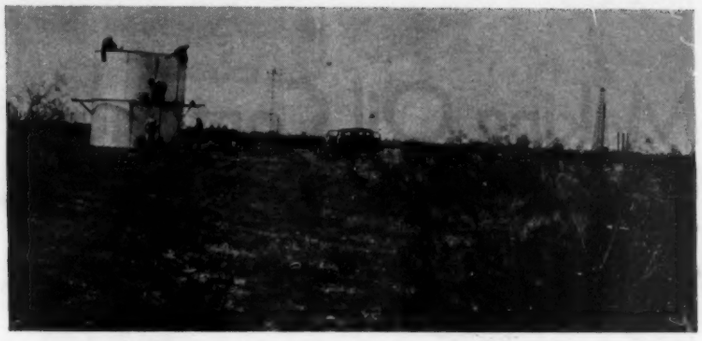
*Excess supply. †Decrease. Note—Total supply equals domestic production plus imports. Total demand equals domestic demand plus exports. Data on demand for refined products are based on refinery shipments. ‡Crude oil only. §Includes natural gasoline.

Crude Oil Runs to Stills and Total All Oils (Bbls.)

	Total imports§	Total exports§	Total crude to stills	Nat. gasoline production	% Gasoline yield from crude oil‡	Total supply all oils*	Total demand all oils*	Stocks all oils Nov. 30
1934, first 11 months	44,095,000	105,877,000	817,326,000	32,981,000	46.5	912,888,000	839,908,000	569,316,000
1933, first 11 months	41,676,000	98,138,000	790,814,000	30,789,000	46.8	907,212,000	794,183,000	607,085,000
Increase, 1934	2,419,000	7,739,000	26,512,000	2,192,000		5,676,000	45,725,000	†37,769,000
Increase, 1934	5.8%	7.8%	3.3%	7.1%		0.6%	5.7%	†6.2%

*Total all oils includes oil, refined products, natural gasoline and benzol. †Decrease. ‡Includes natural gasoline blended at refineries. §Includes crude oil and refinery products. In case of gas oil and fuel oil and wax, imports include only products for domestic use. All data based on Bureau of Mines reports.

Recent Wildcat Tests Confined Largely to Trends in Few States



Early development activity in new pool in West Texas region.

By L. G. E. BIGNELL
Petroleum Engineering Editor

When drilling activities became so pronounced in the East Texas oil fields there was a tendency upon the part of the industry to retard search of new oil fields in other areas mainly because capital for such exploratory work was not readly available, and also because it was generally believed that if additional reserves of oil were developed and added to the large reserves attributed to East Texas and other flush fields it would have a depressing effect upon crude oil prices.

In his address as retiring president of the Tulsa Geological Society, Ed F. Shea, geologist, Stanolind Oil & Gas Co., Tulsa, chose for his subject "Wildcatting in 1934," and presented one of the best papers of the society's year and one that contained much information that should be of interest to the industry at this time.

To compile records of "wildcats" presents numerous problems. It is first necessary to determine what test can be classed as a "wildcat," then to follow its progress through to completion. Where tests are being drilled by promoters or companies with limited capital, it is frequently the case that the scout's reports drop the location for a time and it may again be included in reports and there may be some change in details making it difficult to identify it as the original location.

Mr. Shea did have access to quite complete records and the assistance of others in the geological departments of the Stanolind Oil & Gas Co. and other companies, so it is believed that the figures presented herewith are quite representative of conditions.

Summary of Report

The report covers the Rocky Mountain states and the Mid-Continent area with the Gulf Coast of Louisiana and Texas, also Arkansas and Mississippi, and one well in California, and therefore deals with the oil provinces of greatest activity last year.

There were 72 wildcats drilled in the Rocky Mountain states divided as follows: Wyoming 33, Montana 8, Colorado 26 and Utah 5. In Wyoming the California Co. completed a small well on the Quealy Dome in Albany County, and at the end of the year another well was reported as completed by the California Exploration Co. on the Waugh Dome in Hot Springs County, Wyoming. The only Montana discovery was a well about 9 miles south of the Cut Bank Field. This represents .0415 per cent oil wells out of 72 tests.

In the Mid-Continent and Gulf Coast districts there were 1,163 wildcats reported with 105 new pools opened, and of that number 12 are gas fields. This is 8 per cent oil wells to wildcat tests. For the Rocky Mountain states and the balance of the area under consideration the total is 1,236 classified as wildcats. With only 97 oil wells discovered, the percentage is 7.85.

The great majority of these new discoveries did not result in oil pools of any consequence. Many wells with showings when completed went to water early and others were plugged back to higher formations and in many instances converted into gas wells.

In Kansas there were about 112 wildcat tests that were largely concentrated in a belt that can be traced through the central portion of the State and over what is known as the Barton and Ellsworth arches and then westward with the discovery in Scott County marking the western discovery well. Of these 112 tests, 22 pools were reported as opened, and of that number 8 produced from the Siliceous lime, 4 from the Viola lime, 4 from the Mississippi lime, 5 from the Pennsylvania sands and 3 from the Hunton limestone. The predominance of wells producing from the lime in Kansas is marked and the liberal use of hydrochloric acid had good effect upon completing many of these discovery wells.

The activity in Oklahoma was confined to a broad north and south belt extending through the center of the State, and this trend of development connected with the south end of the band of newly explored territory in Kansas. The buried Nemaha mountains form the approximate center of the band of developments in Oklahoma, but in Kansas the region over these old mountains in the eastern part of the State was tested several years ago and numerous fields discovered.

The report shows that there were 150 wildcat tests in Oklahoma in 1934, and of these 31 reported showings of oil. These shows were found in the following formations. Permian 1, Pennsylvanian 15, Mississippian 1, Misener (Devonian) 2, Hunton (Devonian) 4, and Ordovician 8.

The most promising discovery in Oklahoma, and perhaps in the country, was the Fitts Pool in the Frank graben in Pontotoc County, south of the town of Ada and north of the Arbuckle Mountains. While the area was not worked by geophysical surveys, it was examined by competent geologists and several favorable reports made upon the district. The whole field has not yet been defined, so it is not known how much oil will be put in reserve there, but it has every indication of being a pool of considerable importance.

The other important development in Oklahoma last year was the South Burbank Field in Osage County, where there has been much drilling.

Other reported discoveries in Oklahoma have for the most part been disappointing, for the wells have either been small and the oil mixed with water and they did not produce long, or the hoped for pay horizon was not productive and the hole was plugged back to upper formations for gas, and in one instance for oil.

Texas and the Gulf Coast

The State of Texas has been divided into four districts for better study of the exploratory work last year, and in the 27 counties making up the eastern part of the State there were 157 wildcat tests with only 7 showings. These tests were drilled in the region underlain by the Woodbine sand of Cretaceous age, and the showing secured in the seven wells were not of importance and very little if any oil has been placed in reserve. Certainly nothing to remotely compare with the East Texas oil field was indicated. The Cuyaga Field is not outlined yet but appears to contain about 8,000 acres of productive sands.

South Texas, which includes the area between the Balcones fault south of San Antonio and the Gulf of Mexico and west of a line running north of Matagorda Bay, contains approximately 30,000 square miles of land surface and in this region about 370 wildcats are recorded with 19 discoveries of oil. The region bordering on the south side of the Balcones fault received considerable attention, especially from companies with small capital, because past history of the zone has shown that if discoveries are made the wells will quickly pay out with large profits. However, very few showings were had during last year's operations, and of the 19 discoveries reported most of them were found in what is known as the Reynosa Escarpment trend. This belt runs from the Rio Grande River, in the extreme southwestern portion of Texas, in a northeasterly direction paralleling the coast line as far as a point north of Corpus Christi where it fades out, but the sedimentary formations in which the oil pools have been found extend east into Louisiana. These wells produce from Tertiary except two completed in the Cretaceous formation.

To the east of the north and south line through the west end of Matagorda Bay the Gulf Coast of Texas district extends to the eastern boundary of the State and in this area the wildcat exploration has broadened out from the coast line northward. The reports indicate 122 wildcat tests with 8 discoveries of oil in this area. This is the Salt Dome district of the Texas Gulf Coast and it is a well-known fact that it is usually necessary to drill many wells around the flanks of salt domes before the production is discovered. The pools found in 1934 in this area were not of large aerial extent or reserve volume, being much the same as the majority of the numerous other pools found on salt domes in the past. The discovery wells in this region were usually completed in the Tertiary formations.

Out in the western part of the State, in what is termed the Permian Basin region, or West Texas, there were 67 wildcats with 6 discoveries. Some of these new wells when finished had indications of opening major pools, but subsequent developments have not to date confirmed those hopes of the operators, and the new reserves of West Texas are not of great importance. Most of the discoveries are within the trend of known fields and in some instances it is difficult to determine whether they should be treated as new pools or extensions of present oil fields but producing from other horizons. All new pools are producing from Permian beds in this area as also in New Mexico.

North of the West Texas limestone fields are found like fields in New Mexico, and 15 wildcats are reported for that State with 6 discoveries, 5 oil and 1 gas field. The pools opened connect the trend of production between Hobbs Pool, New Mexico, and Hendricks Field, Winkler County, Texas, with some scattered discoveries to the east of the escarpment of the "Llano Estacado" or the Staked Plains of the region. While the area between Hobbs Pool and the Texas border is being tested by the numerous plays there is still much to be done to outline the limits and reserves of the fields opened in 1934.

Louisiana and Arkansas

In Louisiana there were 120 wildcat tests recorded, but most of them were in the comparatively shallow areas of North Louisiana in the general vicinity of the Sabine Uplift. These shallow tests have not been productive of oil, but five new pools of the salt dome type have been opened in the Gulf Coast region during the last eight months of the year.

In Arkansas out of 34 tests in the southern part of the State only one new discovery has been made in the vicinity of the Rainbow Field near El Dorado.

In Mississippi there are 16 wildcat tests recorded with no oil discoveries, and in Alabama there have been a few random wells drilled, but to date without encouragement in finding oil.

From California it is reported that only one new pool was opened during

(Continued on Page 31)

WILDCAT TESTS AND ESTIMATED COSTS
Rocky Mountain, Mid-Continent and Gulf Coast Regions

State—	Wildcats	Producers	Producing formation	Average depth	Footage drilled	Cost per ft.*	Total costs estimated
Montana	8	1	Cretaceous	2,500	32,400	$12.50	$504,000
Wyoming	33	3	Permian	2,500	82,500	12.50	1,031,250
Colorado	26	0	.....	2,500	45,000	12.50	112,500
Utah	5	0	.....	2,000	10,000	15.00	150,000
Kansas	112	22	See text	3,500	392,000	13.50	5,292,000
Oklahoma	150	31	See text	3,600	540,000	15.00	8,100,000
West Texas	67	6	Permian	3,000	201,000	11.00	2,211,000
Southwest Texas	370	19	Tertiary	2,900	1,073,000	8.00	8,584,000
Texas Gulf Coast	122	8	Tertiary	5,700	695,400	10.00	6,954,000
East Texas	157	7	Cretaceous	3,600	565,200	7.50	4,239,000
New Mexico	15	6	Permian	2,500	37,500	14.00	525,000
Louisiana	120	5	Tertiary	3,750	450,000	7.00	3,200,000
Arkansas	34	1	Cretaceous	3,000	102,000	6.50	663,000
Mississippi	16	0	Mississippian	3,800	60,800	10.00	608,000
	1,225	108			4,396,800		$42,873,750

*Covers contract price plus other expenses.

Making Oil Containers Small Part of Routine at The Texaco Can Plant

By W. T. ZIEGENHAIN

To make a good motor oil is one thing and to make a good can in which to market it is another. Few refining companies now undertake to do both. Whether the increasing volume of oil sold in refinery-sealed cans will prompt the larger units to consider manufacturing their own containers remains to be seen, but a visit to the Texas Corp.'s can plant at Port Arthur, Tex., should convince anyone that mass production is the first essential for the economic operation of such a unit.

This plant operates as a subsidiary of the Texas Corp. and bears the name of the Texaco Can Co. It is located about 5 miles from the corporation's refinery and shares the 50-acre island on which it is located with the export terminal facilities of the refining company. Served with rail and deep water shipping facilities, it is ideally fitted to carry on a general can manufacturing business as well as serve the particular needs of the Texas Co. refineries.

Terminal Island

A brief tabulation of the facilities on the island will give a better idea of the relationship the can plant bears to each and then the actual manufacture of the cans will be discussed. Designed primarily as an export terminal the entire one edge of the island has been lined with warehouses and docks to permit the loading of tankers and case oil boats. Pipe lines lead from the refinery to the storage tanks on the south half of the island. Then, running almost through the center of the island is a line of buildings which house the can plant, the case or shook plant, light oil can filling equipment, laundry and thousands of feet of automatic conveyors.

In all, between 600 and 700 persons are employed in these units and it should be mentioned here that in addition to laying down rules for cleanliness and providing every means for promoting safety among the employes, the company maintains a laundry and a medical staff for first aid treatment in case of accidents or illness. Their health is further safeguarded by providing a nonprofit cafeteria at the plant capable of handling 1,000 persons at one time. These things are mentioned here to emphasize the fact that there is more to making cans than shaping so much tin into a cylinder and crimping on the two ends.

Can Plant

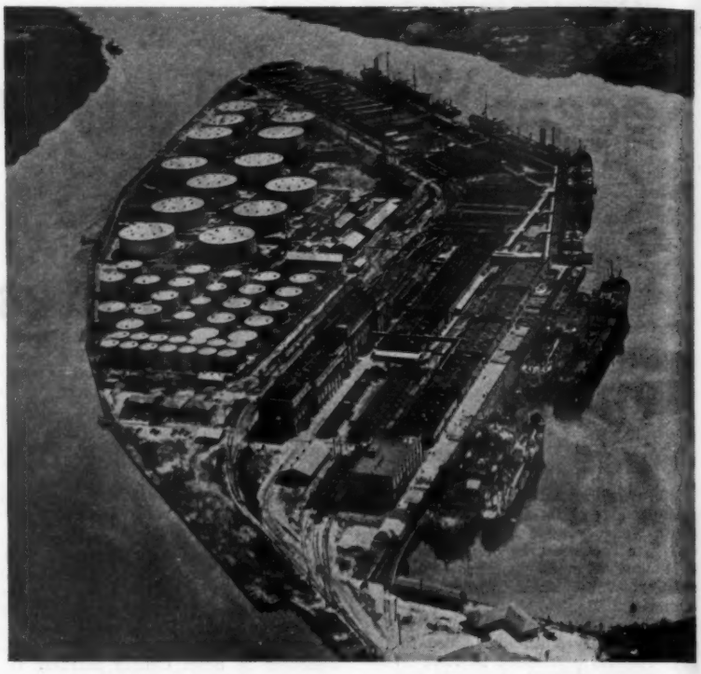
The first step in the actual manufacture of the can is the preparation of the lithograph plate. This means that an artist has already chosen the proper design and color combination. From this single drawing a series of black and white drawings are made on special paper, one for each portion of the design bearing a different color. A grease pencil is used to make these. Then it is necessary to transfer each of these in multiple onto a sheet of paper the size of the sheet of tin from which the cans are to be made. This requires perfect registration in every instance. If this is not done the colors will overlap.

Up to this point the drawing has all been done on a tough waterproof paper with the special pencil and the next step is to transfer the design onto a sensitized zinc plate, one zinc plate for each color. This grease pencil is more accurately designated as a lithographic crayon or tusche and is usually composed of Spanish soap, wax, oil and lampblack. Emphasis is placed upon the oily properties of the pencil because this is the basis for lithography. The fact that the crayon has the property of permitting the transfer of a design from the paper to the prepared metal surface by contact and at the same time yielding an acid resisting coating on the latter surface permits a sharp etching to be made. The action on the metal is carried out by the use of gum arabic, chromic acid and phosphoric acid. The gum arabic desensitizes the surface not covered by the drawing, thereby decreasing any affinity for grease that it may possess, and also is so absorbed by the pores of the zinc plate that it serves to "hold the drawing in place." After etching, the plate is removed from the press and the acid solution is washed off. Then the crayon is washed off the plate leaving only a faint design on the surface. A little asphaltum is then rubbed in and the plate is washed with water. The design holds the film of asphaltum while the rest of the plate does not. Keeping the surface of the plate wet, a roller soaked with an oil ink is passed over the plate and the ink attaches itself to that portion of the plate coated with asphaltum but does not attach itself to the wet surface not a part of the design.

Printing

Satisfied that the zinc plate is properly etched to yield a sharp design, it is taken to the lithographing press where use of it is made to actually print the design on the sheets of tin plate going into the manufacture of cans.

In this press the zinc plate is held tightly against a smooth revolving drum. This drum contacts a hard inked roller where the design picks up a film of ink or paint and within another half revolution the plate impinges a rubber roller



Terminal Island near Port Arthur, Tex., where The Texas Corp. makes its cans and boxes, fills and loads them on ships going to all parts of world

Here the bottom of the sealed cans are crimped on and passed on to the testing machine

Each one of the seams of the 5-gal. can is sealed and the handle is soldered and tested by this machine

which removes that film. In turn this rubber roller contacts the tin plate and actually prints the design on the plate as the latter passes through the press. Where more than one color is used, the process is repeated for each additional color. The Texaco Can Co. makes its own colored inks, and finds it necessary to maintain close inspection to see that colors are duplicated from one batch to another.

The tin plate comes to the plant in bundles of about 2,000 pounds and packed in wooden boxes. The size of the sheets varies according to the size of the cans to be made but in general approximates 18"x24" sheets.

For the manufacture of lubricating oil or light oil cans, the black plate is coated with tin on both sides but plate made for grease cans is generally shipped black and uncoated.

The plate is fed to the presses by hand. From the press the plate passes into the drying oven. It remains in the oven for about 22 minutes where the temperature is maintained to about 300° F., depending upon the nature of the ink used. After the desired number of plates have been inked, they are reprocessed through the press and oven to take on a finishing coat of varnish. This brings out the colors and protects the design.

In most cases oil inks and varnishes are used. Lacquers would speed up the process but they have a tendency to chip and scratch easily, and since the plate must pass through these various shaping machines after it is printed, the matter of having a flexible outside surface is essential.

Cutting Room

From the drying ovens the plate passes to the stamping room where it is cut to exact size. The plate is hand fed by girls in most instances and one girl will make about 20,000 stampings per day. Where higher rates of production are demanded, automatically fed multiple stamping machines will turn out 40,000 to 50,000 pieces in an eight-hour day. Where the process is relatively simple, as in the case of the tops and bottoms for a 1-quart can, the one machine will stamp out 100,000 pieces.

One-Quart Cans

In attempting to explain in a very general way how cans are made the step by step processing of 1-quart sealed containers will be taken as an example. Both 1-quart and 5-quart sealed containers are made in the Texaco plant.

The plate used to make the 1-quart sealed containers comes in a size permitting 10 cans to be cut from it. After the plate is lithographed it goes to the "slitting" machine where it is cut into the 10 identical pieces. Next, each little rectangle is rapidly fed into the body-forming machine where it takes the cylindrical shape.

This is accomplished by poising the rectangle over a cylindrical shaper the size of the can while two arms clamp around it, bending the plate and at the same time forming a lock seam where the two edges are joined. The seam then passes through a bath of molten solder and is firmly sealed.

From here the can shell goes to a machine which flares the ends preparatory to crimping on the bottom and later the top.

The round bottom and top are cut in a similar manner. Each edge is curled and a shallow groove is formed just inside the periphery. This groove is filled with an elastic sealing compound in the same operation. The main body of the can and the bottom are next brought together and tightly crimped to make the finished can except for the filling and topping.

The sawed and fitted boards come to the machine in stacks, they leave as a finished box except for the cover

Inspection

In a few instances the soldering or crimping may not be perfect and it would not be good practice to turn the can out at this point. Instead, each can is tested under an air pressure of about 15 pounds. The testing is done automatically and one machine will handle 100,000 units in a single eight-hour day.

The tested cans then go to a rack from which they are packed into paper cartons holding 24 in each. When the 5-quart cans are packed, six are put into each case. These cartons then go to the warehouse to be later sent to the refinery for filling and closing.

At the present time, facilities are being added to permit the continuous loading of these cans into a box car without first placing them in cartons and in that manner a substantial saving will be effected in transportation.

The spiral loading device at the extreme left is lowered into the hold of the ship by a crane and can deliver 50,000 cases in 8 hours. Its work done, it is lifted out again in a few minutes

Five-Gallon Cans

While the manufacture of 1-quart and 5-quart refinery sealed cans is relatively new at the Texaco plant and is of principal interest to refiners at this time, it should be said here that the total output of these is small compared to the total can output of the plant.

The company makes a full line of oil cans including the well-known 5-gallon export containers on down to the 4-ounce squirt cans. This total production only represents about half the total output of the plant for an equally imposing array of cans is being manufactured for the food industry and others.

Probably of next greatest interest is the manner in which the 5-gallon cans are made, filled, packed and loaded in boats.

The tin plate is processed through the lithographing presses, and ovens in about the same general manner as the 1-quart cans. Oftentimes the cans are not lithographed and are shipped in marked wooden cases instead.

The principal difference in making the two cans comes in the early processing in that two plates are used to form the sides of the 5-gallon can instead of one as in the case of all-round cans. These plates come to the first machine where they are trimmed, edged and bent at right angles to form two sides of the can. Two of these are then brought together and are joined with lock seams to form the square shell. The top and bottom is then crimped on and the crimp is rolled to give it strength. The seams of the cans are then ready to be soldered and this is done by passing the train of cans first through a bath of solder to close one side edge and then through successive baths until the other side seam is tight and also each one of the eight end seams.

Once the main body of the can is completed the handle is automatically soldered to the top. Even the strength of the handle is tested on each can. This is done by means of a little iron handle slipping under the wire and as the can is held in place a strong pull is exerted. One machine solders and places handles on 20,000 cans daily.

Light Oil Filler

Since most of the 5-gallon cans find their way into the foreign market it is only natural that they be filled here and packed for loading. Filling is done by

(Continued on Page 34)

Lithographing presses and drying ovens. The tin plate is fed into the presses by hand and after receiving the painted design, passes through the drying oven where it is held at a temperature of about 300° F. for 22 minutes

Automotive Situation Points to New Peak in 1935 Gasoline Demand

By C. O. WILLSON

NEW YORK, Jan. 14.—If predictions in connection with New York's thirty-fifth annual automobile show are borne out over the next 12 months, the oil industry in 1935 will have another yearly increase in the demand for its principal product — gasoline — not only in the United States but in most of the foreign countries. This will mean the largest total consumption of motor fuels in the history of the industry.

Crowds which jammed the Grand Central Palace many times during the eight-day show brought more enthusiasm to the 28 manufacturers whose products were on exhibion than any show since 1930 and lent credence to their prophecies and those of outsiders that 1935 would see a domestic and foreign demand for motor vehicles exceeding that of the past year. The show for the first time was sponsored by the New York Automobile Merchants Association instead of the National Automobile Chamber of Commerce now known as the Automobile Manufacturers Association. The fact that it was in the hands of the dealers made possible a better gauge as to the actual buying interest of those visiting the show and it was in part their reaction that has been the basis for the predictions that sales in 1935 will show a substantial gain over 1934.

Without attempting to give a detailed report on the operating position of the automotive industry, the following data are of interest in their relation to gasoline consumption over the past year and the prospects for 1935. Production of cars and trucks in the United States and Canada during 1934 totaled 2,885,000 units, a gain of 899,091, or 45 per cent over the 1,985,909 total for 1933, and 100 per cent greater than the 1932 total. Of this gain, approximately 700,000 were sold in the United States.

At the end of the year the Automobile Manufacturers Association estimated there were 24,840,000 cars and trucks registered during 1934. This is a gain of 1,012,710 in registration over 1933, or approximately 4 per cent.

Gain in Gasoline Demand

Turning now to the gasoline demand and the Bureau of Mines figures covering the first 11 months, show that the total domestic demand for gasoline in this country during 1934 was probably between 406,000,000 and 407,000,000 bbls., a gain of around 32,000,000 bbls., or 8 per cent over 1933. These data indicate that all of the increase in gasoline demand cannot be accounted for by the gain in motor vehicle production. The additional car registrations exceed the number of new cars sold in the United States and there is the additional fact that a large number of cars are junked each year and not registered.

The obvious conclusion to be reached is that many old cars which were not registered during 1933 were registered in 1934 and placed in service helping to swell the demand for gasoline along with the new car production. The available data also indicate that consumption of gasoline per car is also increasing due in part to the fact that rate of increase in production of trucks and other commercial vehicles is greater than in the case of passenger cars. The gasoline consumption of these heavier transportation units is 2 to 10 times that of the passenger cars.

Another method of illustrating this situation is to compare registrations and domestic gasoline consumption. The year of greatest registrations was in 1930 when they totaled 26,545,281. The domestic consumption of gasoline that year was 397,591,000 bbls., or less than the total consumption in 1934 which probably will total around 407,000,000 bbls. when final figures are available. Thus, 1934 with 1,705,281 fewer registrations will show a gain of around 3 per cent in gasoline demand over 1930.

With these data in mind it seems reasonable to conclude that a 15 to 20 per cent gain in car production this year over 1934 is a conservative estimate. This will more than offset the junking of old cars so that 1935 will show a gain in domestic gasoline demand over 1934 and incidentally establish a new all time record in that respect.

World Situation

In regard to the world demand for gasoline the present situation in the automotive industry is also encouraging as indicating a new peak in motor fuel requirements. The Automobile Manufacturers Association states that sales of American designed motor vehicles reached the 435,000 mark in 1934 as compared with 242,435 in 1933. Predictions for 1935 range from 600,000 to 650,000 units. The reciprocal trade agreements which have been consummated as part of the "good neighbor" policy of the U. S. Government coupled with the reduction in value of the dollar, has aided the car manufacturers and they are expecting their foreign sales to show further increases in 1935. This fact coupled with the increased production of manufacturers in several other countries points to a total gain in motor vehicles operated and is the basis for the prediction that the gasoline demand in 1935 outside the United States will also increase.

Improve Cars

A visit to the local show tends to dissipate any doubts one might have in regard to optimistic predictions for the automotive industry in 1935. Competent observers agree that "never have manufacturers offered as much car for the money" in all classes as they are doing this year. There is a general improvement in design with many new features which have attracted thousands to the show with a similar reception to be expected in other shows to be held in all parts of the country over the next 60 days.

Increase Compression Ratios

The new features readily apparent and stressed by salesmen include improved streamlining, wider seats in front and rear, luggage house within the body contour, engines moved forward for greater riding comfort, steel roofs and new types of spring suspension. At the same time considerable attention is being given to those who look under the hood of a car before purchase and here lies the greatest interest to the refiners of motor fuels, motor oils and other lubricants.

So far as the general engine design is concerned the trend toward greater horsepower and more speed continues in the 1935 cars. The comparative situation in regard to compression ratios which has a direct relationship to the antiknock properties of motor fuels is shown in the accompanying table. The average compression ratio of the 18 principal models listed is 5.99 to 1 which compares with an average of 5.83 to 1 for corresponding models a year ago.

Several manufacturers have not changed the compression ratios of their cars this year with three cases at least in which they have been lowered. This situation tends to detract from the actual increases made by other manufacturers when average compression ratios are compared with other years.

Optional Ratios 7.45 to 1

Material increases in compression ratios have been made in several models and makes of the Chrysler line and for the first time optional ratios in excess of 7 to 1 are available. The compression ratio of the Plymouth as shown in the table, has been increased from 5.80 to 6.70, the Chrysler 8 from 5.20 to 6.20 and Dodge 6, from 5.50 to 6.50. Chrysler is stressing greater power, speed and efficiency of its new line in its advertising. In its more expensive models, Chrysler Imp. 8 AF and Chrysler IC8 AF—137, the compression ratio of the standard models is 6.50 to 1, with an optional head which increases the ratio of 7.45 to 1, the highest to be made available for general use.

Pontiac continues its standard compression ratio of 6.10 with an optional ratio of 7.10 to 1. Both the Hudson and Terraplane have a 6 to 1 standard with a 7 to 1 optional. The Packard 120, the new medium priced car introduced this year and which is one of the sensations of the show, has a standard compression ratio of 6.50 to 1 with an optional ratio of 7 to 1. The regular Packard 8 reverses this situation with an optional compression ratio less than the standard. This last situation also applies to the Cadillac line. The lowest compression ratio is the Willys 77 with its 5.13 to 1 engine.

Type of Fuels

In connection with the increased compression engines, it is worthy of note that Chrysler, Pontiac and others stress the fact that the higher the compression ratios do not mean that premium motor fuels are necessary. All of them in fact state that the cars will operate satisfactorily with regular grade fuels. In this connection Pontiac and Chrysler have demonstrations showing the design of their new engines and point to the improvement in cooling system which enable them to increase the compression ratios of their engines which in turns add to the general efficiency in performance. In the case of the Plymouth it is contended that not only is premium fuel not necessary but the increased efficiency of the engine decreases motor fuel consumption 10 to 15 per cent. Some of the other manufacturers are pointing to the improvement in their cars from the standpoint of gasoline consumption brought about by improved engine performance with streamlining in body design.

Complete data on motor oil recommendations are not available. Figures available indicate that manufacturers are continuing the trend of the past two years in recommending lighter oils for both winter and summer use.

TREND IN COMPRESSION RATIOS OF LEADING CARS DURING THE PAST FIVE YEARS

	1935					
Car Model, 1935—	Std.	Option.	1934	1933	1932	1931
Auburn 653	6.20	....	6.20	5.26	5.26	....
Buick 60	5.25	....	5.25	5.25	5.09	4.75
Cadillac V-12	6.00	5.65	6.25	5.60	5.30	....
Chevrolet, Master 6	5.45	....	5.45	5.20	5.20	5.02
Chrysler 8-98	6.20	....	5.20	5.20	5.20	....
Dodge 6	6.50	....	5.50	5.50	5.35	5.20
DeSoto 6-98	6.00	....	6.20	5.35	5.35	....
Ford V-8	6.30	....	6.33	6.33	5.51	4.22
Graham, Special 6	5.80	....	6.50	6.50	6.50	....
Hudson 8	6.00	7.00	5.80	5.80	5.80	5.80
Hupmobile	5.75	....	5.75	5.75	5.40	....
Lafayette	5.54	5.73	5.30	....	....	....
Nash 8	5.25	....	5.25	5.10	5.10	5.00
Oldsmobile 8	6.20	....	5.70	5.50	5.90	....
Packard 8	6.50	6.00	6.00	6.00	6.00	....
Plymouth 6	6.70	....	5.80	5.50	4.9	4.6
Pontiac 8	6.20	7.10	6.20	5.70	5.20	4.9
Studebaker Com. 8	6.00	6.50	6.30	5.50	5.20	5.2
Average	5.99		5.83	5.59	5.50	4.96

Note.—So far as possible cars listed for 1934, 1933, 1932, and 1931 were comparable as to model with those shown for 1935.

Filling Stations Must Pay Chain Store Taxes

The Supreme Court of the United States ruled against the Standard Oil Co. of New Jersey in the latter's suit to restrain the State of West Virginia from turning into the state treasury $240,173 tax money paid under protest on its 103 filling stations, 54 bulk plants and 848 exclusive contract outlets which facilities have been held to be stores and are taxable under the state chain store tax act.

Under the law of the State a tax of $2 is placed upon the first store of a chain and the rate per store is increased up to $250 for each in excess of 75 in number.

Under the conditions of the law the Standard Oil Co. of New Jersey will not be able to show a profit from operation on more than a small per cent of the total number of facilities. Conservative estimates place the necessary business at 70,000 gallons of gasoline per year per station in order to pay operating expenses and the indicated number of Standard stations able to show this volume of business is less than 100 or less than 10 per cent of the total.

A discussion of the facts in the case as they were presented originally are contained in an article by C. O. Willson, page 36 of the June 14, 1934, issue of The Oil and Gas Journal.

THE CHEMICAL COP IS ON THE GO —AND NO WONDER

He is keeping the gumbugs out of cracked gasoline in a score of refineries—millions of barrels a month

The chemical cop is Universal liquid inhibitor that keeps the octane rating all in and the gum all out

The chemical cop saves acid costs

He saves gasoline losses

He saves refiners millions a year

If you want to know what he can save you send us samples of your gasoline

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
Owner and Licensor

Reconditioning Plant for Pipe Line Companies

Coating and wrapping of pipe according to specification in plant at Houston

By NEIL WILLIAMS
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., Jan. 14.—Protection of pipe against corrosion is one of the most important phases of oil and gas line laying on the Gulf Coast. The heavy toll exacted by corrision has demanded that pipe line companies direct their attention to this subject. Consequently a great amount of research has been and still is being conducted, and large expenditures have been made in attempts to develop coatings and methods of application which will insure prolonged life of lines.

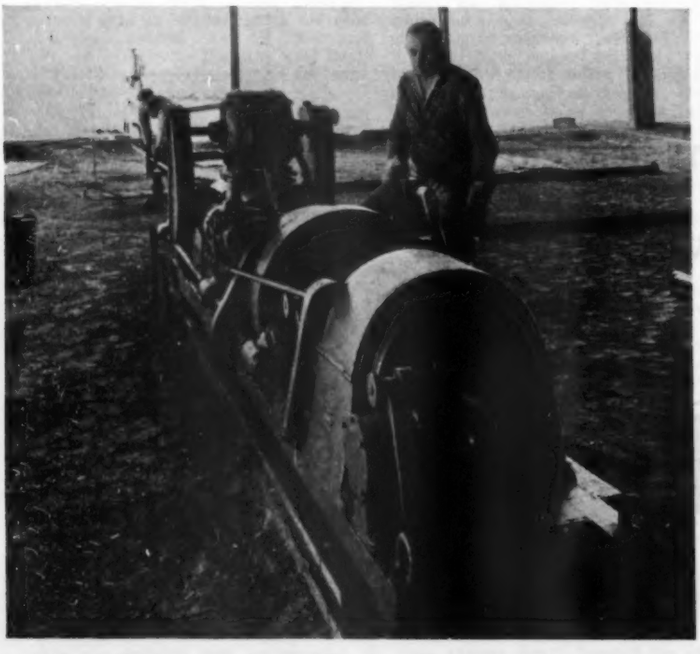
Long strides have been made in the providing of adaptable materials for coating. It is conceded, however, there still is much to learn on the subject, and there are few, if any, coatings which are 100 per cent successful under any and all conditions which exist, such as on the Gulf Coast. In any event, it has been learned, that the best of coatings cannot attain their greatest efficiency if they are not properly applied and if the pipe itself is not thoroughly conditioned before the application.

Adequate cleaning and coating of pipe until comparatively recently has been a problem. On the job in the field this work originally had to be done entirely by hand which proved not only expensive but unsatisfactory. In cleaning it was impossible to remove all the scale and rust by hand scrapers and steel brushes, in coating it was difficult to cover the pipe completely and uniformly. In late years portable cleaning machines which can be moved along a line either by hand or by power have been developed. These have worked very efficiently and comparatively economically especially on shorter stretches of pipe and where the pipe has not been in too bad shape. Coating machines which also can be moved along a line or which can be set up in accessible places also have been provided.

Central Cleaning Yards

On the longer reconditioning jobs, particularly where there is considerable replacement and where the pipe is in especially bad condition, some companies establish central cleaning yards equipped with power-driven stationary cleaning equipment or sand blasts. A few companies have established permanent pipe cleaning yards at centrally located stations along their respective lines. The Houston pipe Line Co. has one such plant at its Edna station on its Southwest Texas-Houston gas trunk. That plant is equipped with sand blasts. Pipe from all points along the line to be reconditioned is brought to that station, where it is thoroughly cleaned, inspected, pit welded, primed and made ready for use again when needed. Central cleaning yards operated by individual companies in some instances, however, have been practical due to the fact that the volume of business may not be sufficient to justify the cost of equipment, etc., for a plant installation by a pipe line company.

General view of central pipe cleaning and coating plant at Houston. The plant is the only one of its kind in the country



Cleaning pipe with a specially designed stationary pipe cleaning machine

In the laying of new pipe, a few companies have got around the job of cleaning and coating by obtaining mill coated and wrapped pipe. The damage to coating and wrapping in shipment has discouraged this practice. In most instances, the steel mills themselves do not encourage the coating and wrapping of the pipe at the mill. To the mills, this work is looked upon somewhat as a profitless accommodation, their purpose primarily being the sale of steel.

Conditioning Plant

The importance, however, which is attached to proper cleaning, conditioning and coating of pipe is reflected in the operation at Houston of a pipe conditioning plant by Johnson-Marsh Corp. Although run as a commercial establishment it is filling a rather unique place in serving the pipe line companies. So far as known it is the only plant of its kind devoted entirely to the cleaning and coating of pipe.

The plant has a capacity of between 15,000 and 16,000 feet of pipe daily. An especial function of the plant is to serve as a consignment point for new pipe shipped in, principally by water, by the various pipe line companies for use throughout this district, the pipe being thoroughly cleaned by special machinery, coated and wrapped according to specification, and reshipped to points designated. In this capacity the plant provides a service for the large steel mills in providing factory coated and wrapped pipe and at the same time eliminating long damaging hauls of such pipe. However, the plant is made use of by various companies as a central cleaning and reconditioning point for old pipe.

In the preliminary operation of cleaning, the pipe is run through a W-K-M 04 stationary type cleaning machine, the only one of its kind ever built and which in a continuous operation mill cleans the pipe and applies the primer. The machine is driven by a 20-horsepower 1,200 r.p.m. electric motor and has four forward and one reverse speeds. The entire setting of the machine is on an eccentric. In the cutter head at the front of the machine is a double set of steel cutters which remove all scale from the pipe, which then is moved through two circular steel wire brushes revolving at 1,750 r.p.m. on their own axes and at 250 r.p.m. around the pipe. The pipe, perfectly cleaned in this operation, passes directly through the primer head having four wire brushes for scrubbing the primer on and four fiber brushes for rubbing and smoothing the primer. Insuring perfect priming of the entire surface, there is an abnormal flow of primer of about 100 times what is necessary. This floods the pipe, the excess draining back to the bottom of the head where it is picked up for recycling by a centrifugal pump.

Coating and Wrapping

The coating and wrapping machine is of the McEverlast type, designed by the Johnson-Marsh Corp. to provide flexibility in the application of coatings and wrappings. In this, the machine is equipped with an overhead manifold to feed the outspreading buckets. One or more of these buckets can be connected at a time to permit the application of a varying number of coats of bitumen and these buckets can be spaced as desired. The wrapping mandrels also are such that they can be spaced as desired and a varying number of wraps can be applied in continuous process and at any particular point in the process of coating.

Melting of the bitumen in the heating pot is done with immersion type heaters so that no direct heat is applied to the bitumen, this eliminating cooking. Auxiliary heating pots permit the increase in volume of bitumen as demanded for varying sizes of pipe. Natural gas is used as fuel, with all temperatures thermostatically controlled. A centrifugal pump picks up the molten bitumen from the pot and discharges it into the overhead manifold and into the outspreading buckets which pour the bitumen over the pipe.

To prevent the chipping or cracking of any of the coatings, all rollers, including the driving disc, which touch the pipe are of rubber. The machine in the plant is operated by electricity although such machines can be operated by other power readily in the event a machine should be moved to the field on a pipe line job. All equipment is housed in a structural steel building 180'x100' in size with a 60-foot crown. H. Boyd Mayes, district manager of the company, is in charge of the operation of the plant.

Solvent Refined Oil Demand Points to Widespread Adoption of Process

By C. O. WILLSON

The solvent refining of lubricating oils which was definitely established in 1934 as an important manufacturing process of the refining industry, gives promise of still wider application in 1935. On a smaller scale the same situation applies to the art of solving dewaxing, as a phase of lubricating oil manufacture.

The past year saw the marketing of solvent refined oils on a wide scale in United States and their acceptance by car owners and car manufacturers. They have become a factor in foreign markets with the certainty that the present output will be materially increased in 1935.

The accompanying table lists 21 solvent extraction plants, of which four are under construction. All but three are located at refineries in United States. These 21 plants have sufficient capacity to refine 34,820 bbls. of charging stock daily. The percentage output of finished oils from these plants will vary widely depending on type of process, how the process is operated, quality of charging stock and specifications of finished products. Taking an average yield of 65 per cent, the plants now operating or under construction have sufficient capacity to refine 20,000 bbls. of finished oils daily.

Eliminating the foreign installations, the plants in United States have a capacity to produce 17,000 bbls. daily of finished lubricants. Over the past year the domestic demand in this country for all lubricating oils has been 50,000 bbls. daily and the export demand 21,000 bbls. daily, or a total of 71,000 bbls. daily.

In determining the possible market for solvent refined oils it is of course true that not all of this total demand can be used as a basis as it includes lubricating uses in which the superior properties claimed for the new oils would not be a commercial factor. Proponents of solvent refining will probably claim at least 80 per cent of the total demand in this country (domestic plus exports) as a market for their products and on that basis the potential demand is 57,000 bbls. daily. With present installations furnishing 17,000 bbls. daily of this demand, this leaves 40,000 bbls. daily yet to be supplied.

Large Expenditures Probable

There is considerable variation in installation costs for the various types of solvent refining operations. In general these variations are dependent on what the individual refiners expect to accomplish in the way of finished products and their previous facilities for the manufacture of lubricating oils. Estimates of total expenditures made to date in solvent refining range from $6,000,000 to $8,000,000. Based on this estimate it will require $18,000,000 to $25,000,000 more to supply the assumed total demand for solvent refined oils in this country.

The possible expenditures for the future in foreign countries are practically the same as those in the United States. The demand for lubricating oils outside the United States is approximately 61,000 bbls. daily, of which 21,000 bbls. daily is furnished by refineries in United States, leaving 40,000 bbls. daily from foreign refineries. Operators of these plants are showing as much interest in the possibilities of solvent refining as are refiners in this country. It is known that engineers of the U.S.S.R. now in this country are paying special attention to recent developments with the expectation that they will become an important factor in European lubricating oil manufacture in the near future. It is also known that in the case of at least two companies the proposed new refinery construction in Italy will include solvent methods for the manufacture of lubricating oils. At least two of the newer refineries in France are expected to add solvent installations during 1935.

The foregoing estimates do not include expenditures for solvent dewaxing installations. Lubricating oil manufacturers up to this time have not manifested as much interest in this development as in solvent extraction. More will be known about the commercial application of certain processes within the next few months. Those familiar with developments in most cases are also optimistic regarding the possibilities of solvent dewaxing and are predicting a wide scale application within the next one or two years.

The question has been asked frequently as to why refiners should make expenditures which may total $50,000,000 at refineries throughout the oil world. The first question asked by an operator who is asked to make additional outlays for plant improvement is usually concerned with whether the new installation will result in lower operating costs so that the additional capital expenditures can be justified on that basis. In the case of solvent dewaxing and extraction there are many angles to consider, depending on factors which will vary with individual refineries and no attempt will be made here to discuss comparative costs. The installations of the past year —particularly those of large capacity— appear to have a strong competitive position where costs are compared with those of installations previously operated. The past history of new developments in refining is that as processing is improved and enlarged, costs are reduced and the entire operation becomes more and more attractive to plant operators.

Meets Quality Demand

In refining, quality of finished products as well as production costs, have always been an important factor in determining manufacturing methods and in the case of solvent extraction, it has been the deciding factor in several installations made over the past two years. Numerous technical and descriptive articles which have appeared in this publication over the past three years have explained in detail the improvement in finished products obtained through solvent refining. Among technologists there has been disagreement as to the importance of some of these improvements. These discussions however hinge more on the significance of certain tests in relation to the performance of lubricating oils, than they do on the comparative propreties of the oils manufactured by the old and the new processes.

In general, it can be said that the solvent refining of lubricating oils fits into the demands of the automotive engineers for better and more uniform oils. Among the claims made for the newer oils are lower viscosity, higher viscosity index, lower carbon residue and greater chemical stability reflected in sludging tests. Stripped of all technical phraseology this simply means that the new oils come closer to meeting the demands of the automotive engineers for a lighter oil which "stands up" under all operating conditions with a reduction in carbon formation and other service troubles associated with the properties of motor oils.

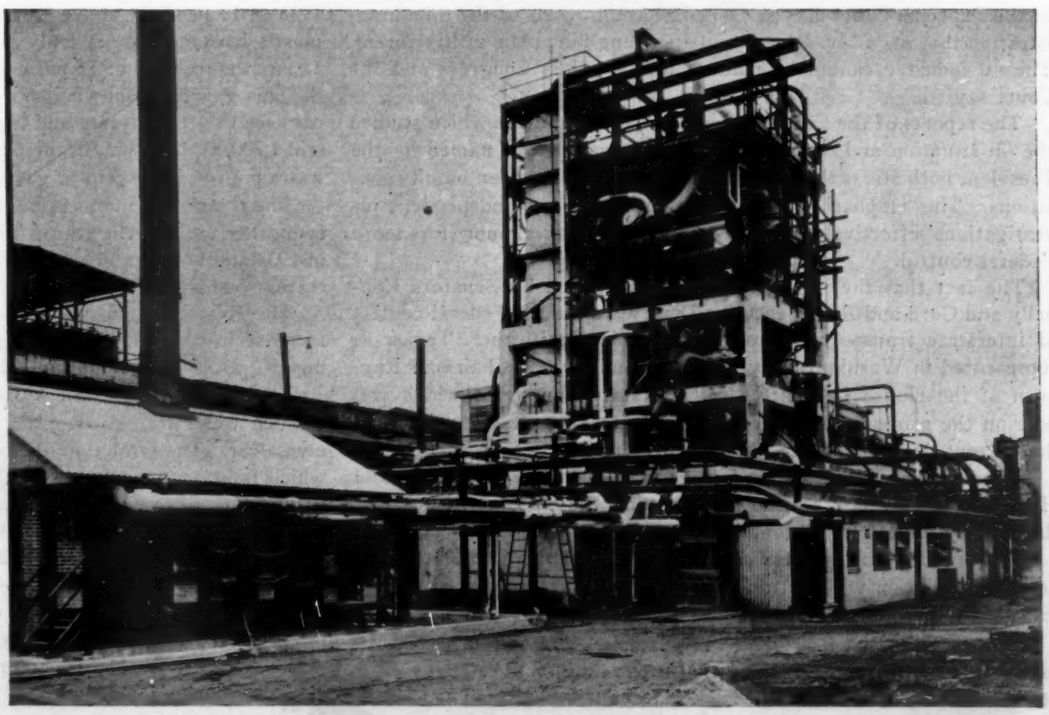
As pointed out recently by a prominent petroleum technologist, the main job of the oil refiner is to refine satisfactory motor fuels and motor oils for the automotive industry which furnishes the bulk of the demand for the most important petroleum products. Due to this situation, the designers of automotive engines in reality have determined the trend in specifications more than refinery operators. To keep pace with trend in engine design, the automotive industry wanted a higher antiknock motor fuel with greater uniformity in that property and the refining industry over a depression period of five years has spent several hundred million dollars in furnishing it.

In the motor oil end, the automotive engineers have always preferred a lower viscosity oil but had to sacrifice other desirable performance properties in order to use it. Improvement in oils along the line of having lighter motor oils which show relatively little change in viscosity within the operating temperatures of engines, with chemical stability greatly improved, of course predates the advent of solvent refining. But its proponents of the latter feel that it is the logical manufacturing method of securing these desirable properties in oils and is a necessary safeguard for any operator who expects to keep pace with probable developments in the future.

List of Plants

In the accompanying list of plants, the Nitrobenzene blant of the Atlantic Refining Co. is scheduled to start operating this month. The plant was designed and built by Atlantic engineers follow-

(Continued on Page 34)



New solvent extraction plant of the Standard Oil Co. of New Jersey at Bayonne, N. J. Phenol used as solvent in extraction operation.

THE OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

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Strictly Limited

The oil industry seems likely to get a square deal from this Congress. The three measures introduced to remedy the constitutional defect discovered by the Supreme Court are very strictly limited to that correction. There is no attempt to impose or extend Federal control of the industry and apparently no sentiment in the Senate or the House demanding any such control in the name of the Federal government.

This attitude on the part of Congress, coupled with the opinion of the Supreme Court, has so dashed the aspirations of the oil administration that even Mr. Ickes is soft-pedaling his public utility threat. The oil industry cannot be made a utility unless Congress and the Court say so.

The reports of the Cole congressional subcommittee which studied the oil situation and of the Natural Resources Board named by the President both stress the necessity for State co-operation on oil regulations. This emphasis on State regulation by two independent investigations effectively disposes of the official clamor for more Federal control.

The fact that the remedial legislation offered by Senators Connally and Gore and Representative Disney stops with Federal control of interstate transportation of "hot" oil is significant. Texas, as represented in Washington by Senator Connally and Chairman Rayburn of the House Committee on Interstate Commerce which will pass on the proposed legislation, is ready to approve Federal aid to that extent, but no further.

Remembering the effective influence of Texas in the Senate and House during the last session in thwarting the Thomas-Disney bill, this strictly limited legislation should now be obtainable.

This is as far as Congress should go. Any attempt to clutter the present legislation with extraneous matters will merely delay action and defeat the purpose.

Texas, aware that its right to regulate is being tested by the use it makes of it, is showing that it can be effective. The State Tender Board of which Tucker Royall is chairman is proving what can be done even with the Federal Board withdrawn.

There has been ample time for the unruly element to think up new schemes for evasion if there were any, but, confronted with a State Tender Board and a State Attorney General who mean business, they have been cowed into submission.

Possibly there will be the usual effort to raise litigious obstructions but with a determined and aggressive course taken by the State officials in charge of enforcement these should be forced to speedy disposal.

Texas opinion, which has caused the legislatures to progressively strengthen oil regulatory laws, can be depended upon to call for whatever supplementary amendments are needed.

Regulation in East Texas is no longer a local sideshow. It is out in the big ring in the full glare of the spotlight where every little movement can be observed.

Actions will be analyzed, motives sought, connections probed for fuller understanding. The people of Texas can be trusted to reach a just verdict.

The past week has shown that Texas can enforce regulation. It cannot fail without exposing those who are responsible.

Texas now has every opportunity to come through. The threat of Federal interference has been definitely removed and Federal assistance limited to the point where it meets the approval of Texas.

The next step should be the introduction at Austin of a measure authorizing the State to negotiate an interstate compact with its fellow oil-producing States on terms that Texas can accept.

Such an agreement would assure allocations that would be fair to each State in meeting the estimated total demand which it has been proved can be calculated to within a very small margin of error.

If this sensible course is followed it can be pressed to conclusion before the expiration of the code and avoid any pretext for continuing the shackles of bureaucratic control, restoring to the industry and the States the proper management of their own affairs.

Better Than Thought

The oil industry has recovered so far that it is calculated this year's domestic gasoline consumption will establish a new record.

Analysis of the Bureau of Mines report for the first eleven months of last year, elsewhere in this issue, reveals that the gain in domestic demand was much better than thought, with possibly a gain of 8 per cent in 1934 over 1933.

The gain of 15 per cent during November over the same month in 1933 or 10 per cent above November of 1931, the year of largest domestic consumption, is truly remarkable, bringing the total for the 11 months to within 99.5 per cent of the best record in the industry.

This gain it is shown is not wholly explained by the 700,000 new cars seen on the streets and highways during the year. There were still 1,700,000 less than in the peak registration year of 1930 but there was a gain of 3 per cent in gasoline consumption over 1930.

The 8 per cent increase in demand over 1933 is attributed also to two other factors, the return to use of cars that were not registered in 1933 and the greater proportionate increase in truck and bus registrations calling for 2 to 10 times as much fuel per vehicle as a car.

The New York automobile show estimate of a 15 or 20 per cent increase in car production this year justifies the conclusion that domestic gasoline consumption will reach a new all-time high in 1935.

The trend of American prices is bringing our cars within reach of a much wider foreign population eager to grasp the opportunity to own a car. The reduction of taxation upon cars and gasoline abroad, which is being urged upon some of the governments as an essential to speeding recovery, would greatly enlarge this market.

All in all, so far as our demand is concerned, the oil industry, which had little cause to complain on that score even during the depression, is definitely out of the rut and back on the high road.

On the supply side we are nearer stabilization than for many years with restraint of overproduction practically assured through the co-operation of the industry and the oil-producing States.

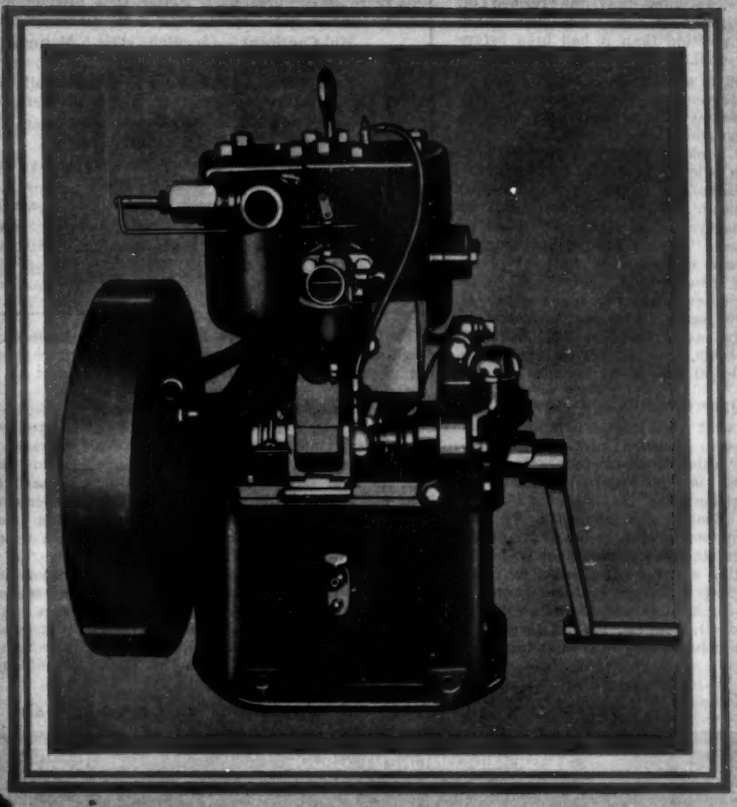
Only the grossest greed in excessive operations can deprive the industry of a prosperous year.

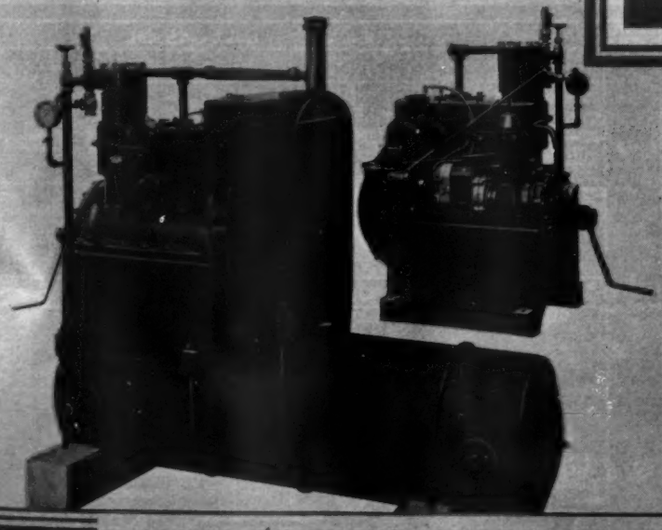
NRA MEMBER U.S. WE DO OUR PART

STARTING AIR COMPRESSORS

designed especially for starting gas and oil engines

THE ordinary air compressors which have been pressed into air starting service were originally designed for around 100 pounds discharge pressure. The customary air starting pressure for gas engines is 150 to 200 pounds and for Diesel engines 250 pounds. Type FD-2 is a combined gas or gasoline driven single-stage air compressor which has been especially designed to compress up to 250 pounds. The power cylinder and the compressor cylinder are cast in the same block. Both are water-cooled. This simple but modern self-contained unit is priced so that operators can afford to air start even their oil field pumping engines and eliminate the hazards of hand starting.





The Type FD-4 is a similar unit of somewhat more than twice the capacity. It has two power cylinders and two compressor cylinders operating two-stage all cast in the same block. It can be furnished with air receiver, cooling radiator and electric starter if they are desired.

MAIL THIS COUPON FOR COOPER-BESSEMER BULLETINS

THE COOPER-BESSEMER CORPORATION, Mt. Vernon, Ohio: ☐ Send me your Bulletin on the 1½ H. P. combined auxiliary starting engine and compressor, Type FD-2. ☐ Send me your Bulletin on the two-stage combined auxiliary starting engine and compressor, Type FD-4.

(Simply check desired Bulletin. Then use space at bottom for name, company and address.)

Group 3 Market Recovers From Its Fright and Is Believed to Be in Better Shape Than Before

By T. F. SMILEY

The Group 3 market appeared this week to have made an almost complete recovery from jangled nerves and a few painful contusions suffered January 7, when the Supreme Court invalidated the section of the recovery act designed to stop hot oil operations. Prices, which had taken a frightened dive upon news of the court's action, climbed back to their previous levels, and informed observers expressed the view that the refined oil market probably was in a more satisfactory position than it had been before its bad spell.

Which is not saying a whole lot.

The shivery market weakness attending announcement of the court decision was aggravated by short sales on the part of brokers who expected a sharp break in prices and by the sudden activity of East Texas refiners who believed the decision opened an opportunity to rid themselves of gasoline made from illicit crude. These latter rushed to telephones and offered their material at reductions from ruling quotations. With the low-octane Motor grade running at about 3⅝ cents resale in the spot market, they eagerly sold at 3¼, 3⅛ and even 3 cents. One refiner is reported to have sold 50 cars at 3¼ cents.

Opportunity Was a Mirage

But what had looked like an opportunity soon proved a mirage. All these sales of outlawed motor fuel were phantom, for it developed that delivery could not be made. Although the Federal Tender Board was abolished by the court's action, the tender board set up by the State Railroad Commission was still functioning and the commission let it be known that it not only would continue to require tenders on intrastate shipments of oil products, but on shipments from the point of origin to interstate carriers.

That left surreptitious movement by truck as the only likely means of disposing of hot gasoline. This was resorted to and it was reported this week that of 21 refineries operating in the East Texas district only 10 could obtain tenders. The 11 others, relatively small plants, were said to be making excited efforts to move their product out in trucks and selling it at cut prices. This method of evading the law was made more precarious by the State Highway Commission, which assigned patrolmen to aid inspectors of the Railroad Commission in halting trucks and turning back those unaccompanied by tenders.

As for brokers who sold short, their dreams of easy profits were shattered by the rebound of prices. None of them made any money and the fingers of some were burned.

Majors Do Some Buying

Close to 200 cars of gasoline were reported to have been bought by major integrated companies in the last few days from independent refiners in North Texas, Oklahoma and Kansas. These independent refiners are understood to have been among those whose spot market outlets were curtailed by contracts entered into by their former customers with major companies. Stocks accumulated as a result of this abridgment of outlets were said to have been assuming the aspect of a market threat.

Definite steps toward retail market stabilization in the East and Middle West were accompanied by improvement in the Oklahoma area, where tank wagon and service station prices were advanced 1 cent January 10.

Suits challenging the right of the Texas Railroad Commission to require tenders for shipment of oil and refined products in hand before the commission's order went into effect December 5 remain a somewhat disquieting factor in the tank car market, but these are expected to be out of the way soon. Observers say the importance of the suits is likely to be exaggerated. They point out that even if the court's decision should be adverse to the commission the quantity of material involved—the total, including crude, gasoline, fuel oil, etc., is estimated at 2,200,000 bbls.—is too small to exert more than a minor and momentary disturbing influence.

Jobber buying was still at a low ebb, but indications of a better market undertone were discernible throughout the trade this week.

Naturals Hold Their Ground

There had been a feeling that this week would witness a little further subsidence in natural gasoline, but if there was any it was difficult to detect and it had only a fleeting effect on quotations. Prices throughout the list were unchanged from those of a week ago, although a few isolated shipments of 26-70 at 3⅜ cents into northern territory where freight rates were unfavorable were reported.

A rather large supply of natural gasoline is reported to be available from manufacturers, not large enough, however, to have any serious effect on prices. Several influences contribute to the fact that there is adequacy now where a few weeks ago there was almost scarcity.

For one thing, refiners are getting too low prices for their motor fuel, in con-

(Continued on Page 32)

Refined Oil Market Barometer

A waiting attitude seems to have been adopted by markets in all areas. Although the trade snapped back quickly from its attack of nerves following the court's invalidation of Section 9(c), there has been no revival of jobber buying. The retail situation in gasoline has undergone distinct improvement, but in the East, where vicious price wars recently raged, there prevails a feeling that production of crude and gasoline may get out of hand again, with a repetition of demoralized markets.

Mid-Continent.—Gasoline slow. Naturals steady. Heating oils off. Lubricants steady.

East Coast.—Kerosene and furnace oils stronger. Tank car gasoline prices advanced in several areas. Steam-refined and bright stocks soft.

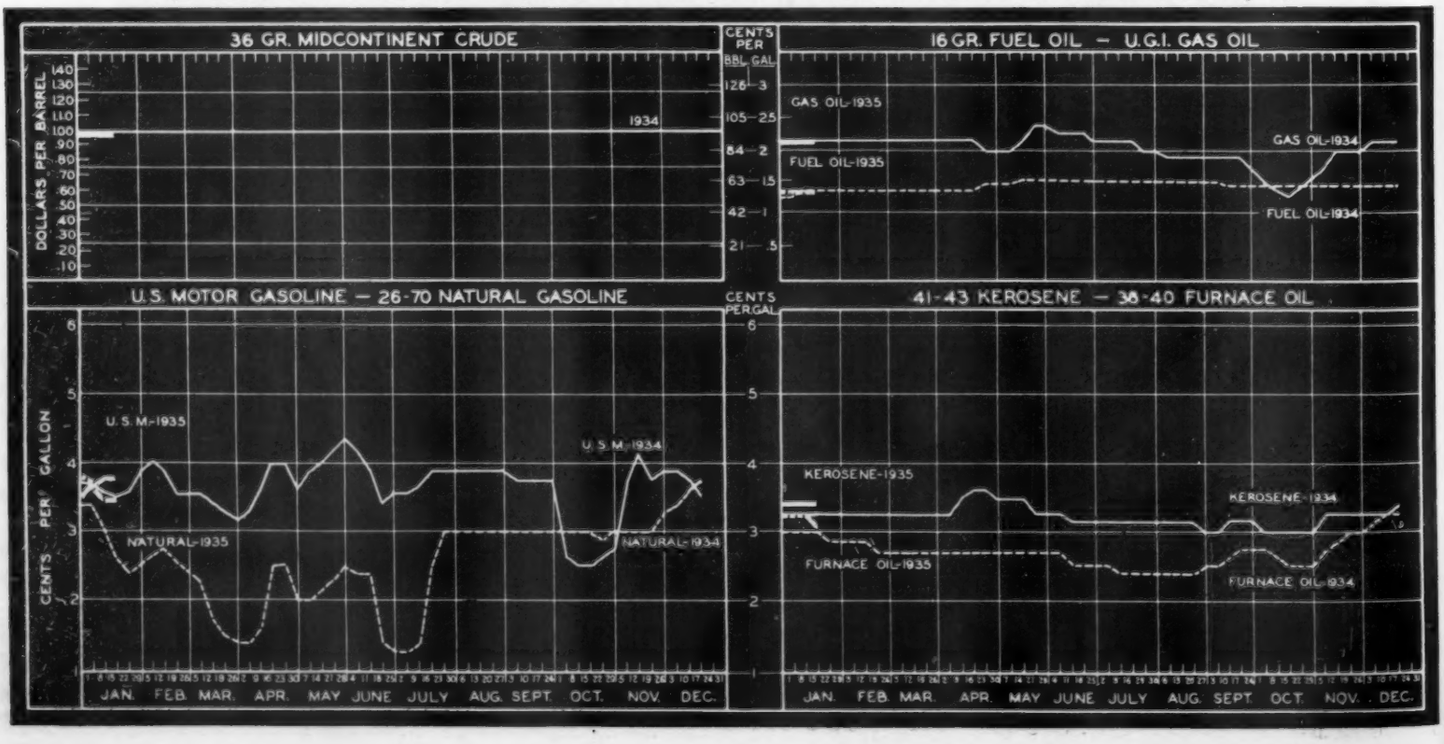
Gulf Coast.—Kerosene scarce and higher. Gasoline steady at unchanged prices. Fuels firmer. Lubricants sluggish.

Pennsylvania.—Gasoline and naphthas weak. Kerosene up. Efforts made to revive sagging bright stocks.

California.—Markets inactive, with weakening tendency. No price changes.

Chicago.—Gasoline fairly steady, notwithstanding conflicting influences. Retail markets quiet.

Representative Mid-Continent Quotations on Crude Oil and Refined Products Basis Oklahoma (Group 3)



Refined Oil Prices Advance on Atlantic Coast; May Adopt New Policy on Crude Prices

By C. O. WILLSON
New York Bureau, The Oil and Gas Journal

NEW YORK, Jan. 14. — Advances in tank car gasoline prices at several points in the eastern part of the United States which were in the making a week ago when the U. S. Supreme Court decision was announced, marterialized the latter part of last week in the postings of several major companies. The advance was one-fourth cent on all white grades making the new U. S. Motor prices in New York Harbor for New York delivery under 60 octane 5½, middle octane 5¾ cents and 65 octane and above 6 cents. Not all the refiners and wholesalers in this territory had met this advance but the number who had, was sufficient to establish their quotations at the high of the market. The other advance of the week was a one-fourth cent increase by several companies establishing a tank car price of 6¼ cents in New York Harbor and several other Atlantic Seaboard points.

Had the Supreme Court decision holding invalid Section 9(c) of the Recovery Act, been postponed another 10 days it is probable that an additional one-fourth or one-half cent advance in gasoline tank car prices would have materialized. The efforts of the past several weeks to bring about more stable gasoline marketing conditions in this territory have been meeting with success and it was expected that by the end of the month, retail and tank car prices would return to normal at practically all points.

Return to Normal Prices

A week ago posted dealer and service station prices at Buffalo, Rochester and other up state points were advanced from 3 to 5 cents per gallon bringing a return to what are considered normal prices. This followed similar action in northern New Jersey last month with price increases at several points in New England, New Jersey and other Atlantic Seaboard points which have been below normal. If these dealer and station prices were supported it was expected that the tank car prices along the Atlantic Seaboard would be advanced at last one-half cent a gallon. Despite the somewhat bearish feeling that development over night in marketing circles following the Supreme Court decision several companies advanced their quotations one-fourth cent as previously explained.

Trade opinion was mixed as to what will happen now that certain phases of the federal control plans have been held invalid. There is a more hopeful attitude today than there was a week ago, a few predicting that the decision will result in new laws and regulations which will tighten the control so that the improvement in the gasoline situation which undoubtedly has been under way for several weeks, will continue to strengthen.

Others are less optimistic. The fear is expressed that crude oil and gasoline production will increase materially and the market will duplicate conditions that prevailed over the greater part of last year. This would mean increased supplies at the Gulf Coast which in turn result in low priced shipments to the Atlantic Seaboard where the trade would again be faced with price cutting in tank car, dealer, tank wagon and service station markets.

One authority predicts that if this development materializes or even threatens in the near future, a general downward revision in posted crude oil prices will result. It is the belief of this observer and others that major companies will not support the crude market as they did last year in the face of a weak refinery and retail market for gasoline. It is contended that over the greater part of last year the refinery and consumer markets justified postings for crude oil at the wells in the Mid-Continent of from 50 to 75 cents per barrel instead of the $1 base price which was maintained throughout the year. This situation was particularly critical in this territory over the last three months of 1934 when certain companies sustained heavy losses paying the $1 base price for crude in the face of a demoralized gasoline market. The feeling appears general that the companies concerned will not permit this situation to be duplicated in 1935. If the gasoline prices for any reason cannot be maintained, the result will be a reduction in crude oil quotations so that all branches of the industry suffer equally.

In the present situation this is interpreted to mean that any extension of hot oil operations so that general markets are threatened in this territory including exports, will result immediately in lowering postings for crude oil so that all refiners will be on an equal basis in the scramble to sell in an oversupplied market. It is believed that the next two or three weeks will determine what will be done and in the meanwhile it is probable that markets here will mark time.

Statistical Situation

The following table, based on the latest report of the Bureau of Mines released last week, summarizes the operating and stock situation in this territory (data in barrels):

OUTPUT—EAST COAST REFINERIES

	Nov., 1934	Nov., 1933	Oct., 1934
Crude runs to stills	13,722,000	12,911,000	14,654,000
Gasoline	5,807,000	5,977,000	5,998,000
Kerosene	879,000	767,000	935,000
Gas oil and distillate	1,485,000	1,426,000	1,606,000
Residual oils	3,781,000	3,411,000	3,678,000
Lubricating oils	637,000	640,000	638,000
Wax (pounds)	18,200,000	21,840,000	17,920,000
Coke (tons)	10,800	14,000	11,400
Asphalt (tons)	89,400	78,000	133,800
Road oils	30,000	38,000	45,000

STOCKS END OF MONTH

Gasoline*	12,170,000	15,011,000	12,748,000
Kerosene	1,757,000	1,710,000	2,125,000
Gas oil and distillate	6,525,000	5,046,000	6,850,000
Residual oils	7,955,000	3,829,000	8,180,000
Lubricating oils	2,159,000	2,100,000	2,128,000
Wax (pounds)	53,639,000	18,673,000	52,422,000
Coke (tons)	28,000	38,700	28,400
Asphalt (tons)	93,200	85,100	93,600
Road oils	53,000	110,000	47,000

*At refineries, bulk station and pipe lines.

In regard to output, East Coast refiners ran more crude to their stills in November, 1934, than they did in November, 1933, but produced less gasoline. Reflecting the favorable market for kerosene they increased their output of that product materially. In regard to the production of other products there was little change for the two months. Comparing November with October, the crude runs to stills of the former month were slightly less. Production of asphalt and road oils as is usually the case, materially decreased during November.

The gasoline stock situation at the end of November was better than on the same date in 1933 by 3,000,000 bbls. Over the past year the Bureau of Mines has changed its method of reporting gasoline stock and this may in part account for the change. It is known, however, that at least two of the larger refiners closed in November and also December with substantially less gasoline on hand than they had the year previous.

Refiners of kerosene which has been strongest product in the eastern refinery market for several weeks, had slightly more stocks on hand at the end of November than on November 30, 1933. They decreased 368,000 bbls. during November despite the increase in production reflecting a heavy demand during the month which continued through December. Stocks of gas oil and distillate decreased 300,000 bbls. during November but were 1,500,000 bbls. greater at the end of the month than on the same date in 1933. Stocks of fuel oil (residual) at the end of November were 100 per cent greater than on the same date in 1933.

Stocks of lubricating oils showed little change during November and were about the same as the year previous. Stocks of petroleum wax increased approximately 200 per cent during the year. A year ago the wax situation was particularly strong from the statistical viewpoint. Now the reverse is true.

Refiners closed the road oil season with about half the stocks they had a year ago. Stocks of petroleum coke for which there is a steady demand in this territory are 25 per cent less than they were a year ago.

Prices

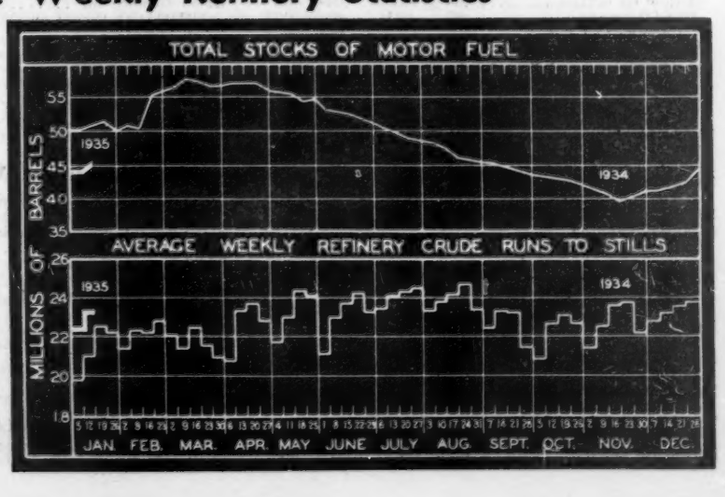
Except for the advances in gasoline and kerosene previously explained quotations on refinery products are practically the same as a week ago. Most of the major refiners are quoting 6¼ cents for kerosene but there is still some

(Continued on Page 46)

American Petroleum Institute Weekly Refinery Statistics

Week Ending January 12, 1935

	Capacity reporting per cent	Daily crude runs (bbls.)	Finished motor fuel (bbls.)	Gas oil and fuel oil (bbls.)
East Coast	100.0	464,000	13,172,000	12,593,000
Appalachian	93.3	90,000	1,880,000	1,329,000
Indiana, Illinois, Kentucky	94.6	311,000	7,421,000	4,882,000
Oklahoma, Kansas, Missouri	83.7	251,000	4,423,000	4,065,000
Inland Texas	47.6	95,000	1,233,000	1,645,000
Texas Gulf	97.7	536,000	5,412,000	10,466,000
Louisiana Gulf	96.4	117,000	1,078,000	4,181,000
North Louisiana and Arkansas	83.7	48,000	197,000	460,000
Rocky Mountain	66.7	29,000	632,000	738,000
California	96.9	392,000	10,185,000	66,455,000
Total United States	89.8	2,333,000	45,633,000	106,814,000



REFINERY AND CRUDE PRICES

Quotations on refined products are for interstate or export movement except as otherwise noted

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasolines

	Jan. 15		Jan. 8	
OKLAHOMA (Group 3)—				
U. S. Motor grades:				
Below 63 octane	.03¾	.03⅞	.03¾	.03⅞
63-70 octane	.04⅜	.04⅝	.04⅜	.04⅝
60-62 400 grades:				
Below 63 octane	.03¾	.03⅞	.03¾	.03⅞
63-70 octane	.04⅜	.04⅝	.04⅜	.04⅝
64-66 375	.04	.04¼	.04	.04¼
68-70 360	.04¼	.04⅜	.04¼	.04⅜
NORTH TEXAS—				
U. S. Motor grades:				
Below 63 octane	.03¾	.03⅞	.03¾	.03⅞
63-70 octane	.04⅜	.04½	.04⅜	.04½
60-62 400	.03¾	.03⅞	.03¾	.03⅞
64-66 375	.03⅞	.04	.03⅞	.04
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 63 octane	.04¼	.04⅜	.04¼	.04⅜
63-70 octane	.05⅜		.05⅜	
60-62 400	.04¼	.04½	.04¼	.04½
ARKANSAS (Ark., N. La. & Miss. del.)—				
U. S. Motor grades:				
Below 63 octane	.04¼	.04⅜	.04¼	.04⅜
63-70 octane	.05⅜		.05⅜	
CHICAGO (based on Oklahoma Group 3)—				
U. S. Motor grades:				
Below 63 octane	.03¾	.04	.03¾	.04
63-70 octane	.04½	.04¾	.04½	.04¾
60-62 400	.03¾	.04	.03¾	.04
64-66 375	.04	.04¼	.04	.04¼
68-70 360	.04¼	.04½	.04¼	.04½
Aviation fighting grade	.04⅞	.05	.04⅞	.05
PENNSYLVANIA (inland refineries)—				
58-60 U. S. Motor:				
Below 60 octane	.04		.04¼	
60-64.9 octane	.05⅝		.05⅝	.05¾
65-70 octane	.06		.06	.06⅛
68-70 350	.05½		.05½	
CALIFORNIA (domestic movement)—				
54-58 U. S. Motor	.07	.08	.07	.08
58-60 400	.08	.09	.08	.09
EAST COAST—				
U. S. Motor, below 60 octane:				
*New York	.05¼	.05½	.05¼	
Baltimore	.05¼	.05½	.05¼	
U. S. Motor, 60-64 octane:				
*New York (Bayonne)	†.05½	.05¾	†.05½	
Philadelphia	.05½	.05¾	.05½	
Boston	.05¾		.05½	
Baltimore	.05½	.05¾	.05½	
Charleston, S. C.	.05½	.05¾	.05½	
U. S. Motor, 65 and above:				
*New York	‡.05¾	.06	‡.05¾	
Philadelphia	.05¾	.06	.05¾	
Boston	.06	.06¼	.05¾	.06
Baltimore	.05¾	.06	.05¾	
Charleston, S. C.	.05¾	.06	.05¾	

*All grades of gasoline one-fourth cent less for small barge shipments.
†For New Jersey delivery, 6¼ cents.
‡For New Jersey delivery, 6½ cents.

GULF COAST (domestic)—				
U. S. Motor:				
Below 60 octane	.04¾	.05	.04¾	.05
60-64.9 octane	.05	.05¼	.05	.05¼
65 octane and higher	.05¼		.05¼	

Naphthas

	Jan. 15	Jan. 8
PENNSYLVANIA (inland refineries)—		
50-52 (blending)	.04	.04⅛
52-54 450 (blending)	.04	.04⅛
54-56 450 (blending)	.04	.04⅛
50-52 450 (blending)	.04	.04⅛
CHICAGO (based on Oklahoma Group 3)—		
50-52 450 (blending)	.03¾ .04	.03¾ .04
Cleaners' naphtha, 56-58 gr., 200 i.b.p., 320 e.p.	.06¾ .07	.06¾ .07
Lacquer diluent, 180 i.b.p.-250 e.p.	.07¾ .08	.07¾ .08
Lacquer diluent, 140 i.b.p., 200 e.p.	.08¾ .09	.08¾ .09
Rubber solvent, 68-70 gr., 100 i.b.p., 300 e.p.	.06¾ .07	0.6¾ .07
Stoddard solvent, 300 i.b.p., 410 e.p., over 83° flash	.06¼ .06½	.06¼ .06½
Pet. thinner, 290-300 i.b.p., 415 e.p., over 83° flash	.06¼ .06½	.06¼ .06½
V.M.&P. naphtha, 56-58 gr., 190-200 i.b.p., 330 e.p.	.06¾ .07	.06¾ .07
Petroleum spirits	.05¾ .06	.05¾ .06

Natural Gasolines

	Jan. 15		Jan. 8	
OKLAHOMA (Group 3)—				
Grade 26-70	.03½		.03½	
Grade 18-55	.04⅛	.04¼	.04⅛	.04¼
Low vapor pressure grades:				
*14 lb. v.p. (max.)	.04⅝	.04⅞	.04⅝	.04⅞
*12 lb. v.p. (max.)	.04¾	.04⅞	.04¾	.04⅞
NORTH TEXAS—				
Grade 26-70	.03¼		.03¼	
Grade 18-55	.03⅞	.04⅛	.03⅞	.04⅛
Low vapor pressure grades:				
*14 lb. v.p. (max.)	.04¼	.04½	.04¼	.04½
*12 lb. v.p. (max.)	.04⅝	.04⅞	.04⅝	.04⅞
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
Grade 26-70	.03¾	.03⅞	.03¾	.03⅞
CALIFORNIA—				
75-85 375	.06½	.06¾	.06½	.06¾

*Prices nominal, virtually no spot market.

Kerosenes

(All kerosenes water white)

	Jan. 15		Jan. 8	
OKLAHOMA (Group 3)—				
41-43	.03⅜	.03½	.03⅜	.03½
42-44	.03½	.03⅝	.03½	.03⅝
NORTH TEXAS—				
40-41	.03½	.03¼	.03⅛	.03¼
41-43	.03⅜	.03½	.03⅜	.03½
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
41-43	.03⅜		.03⅜	
ARKANSAS (Ark., N. La. & Miss. del.)—				
41-43	.03⅜		.03⅜	
PENNSYLVANIA (inland refineries)—				
45	.04⅜	.04½	.04¼	.04½
46	.04½	.04⅝	.04⅜	.04⅝
47	.04⅝	.04¾	.04½	.04¾
CHICAGO (based on Oklahoma Group 3)—				
41-43	.03½	.03⅝	.03½	.03⅝
42-44	.03⅝	.03¾	.03⅝	.03¾
CALIFORNIA (Pacific Coast consumption)—				
38-40 high burning test	.04¾	.05¼	.04¾	.05¼
NEW YORK (Bayonne, N. J.)—				
41-43	.06¼		.05¾	.06
GULF COAST (domestic)—				
41-43	.04¾	.05	.04½	.04⅝

Petroleum Coke

(Prices per ton f.o.b. refineries in Chicago area)
(Refineries will absorb freight to 80 cents a ton)

	Jan. 15	Jan. 8
Still run	6.00	6.00
Direct from still	7.00	7.00
Egg, nut, pea	8.50	8.50
Lump	8.50	8.50

Furnace Oils and Tractor Fuels

(Zero cold test under 190° flash and good odor)

	Jan. 15		Jan. 8	
OKLAHOMA (Group 3)—				
32-36 straw	.03	.03½	.03⅛	.03¼
36-38 straw	.03⅛	.03¼	.03¼	.03¼
38-40 straw	.03¼	.03¼	.03¼	.03⅜
38-40 prime white	.03¼	.03⅜	.03⅜	.03½
NORTH TEXAS—				
38-40 straw	.03¼	.03⅜	.03¼	.03⅜
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
36-40 furnace oil	.03	.03¼	.03⅛	.03¼
ARKANSAS (Ark., N. La. & Miss. del.)—				
32-36 furnace oil	.03	.03¼	.03⅛	.03¼
CHICAGO (based on Oklahoma Group 3)—				
32-36 straw	.03¼	.03½	.03¼	.03½
38-40 straw	.03¼	.03½	.03¼	.03½
38-40 prime white	.03⅜	.03½	.03⅜	.03½
NEW YORK (Bayonne, N. J.)—				
No. 1	.06	.06¼	.05½	.05¾
No. 2	.04¾		.04¾	
No. 4	.04¾		.04¾	

Gas Oil, Diesel Oil and Fuel Oil

(Gas oil per gal., Diesel and fuel oils per bbl.)

	Jan. 15		Jan. 8	
OKLAHOMA (Group 3)—				
32-36 gas oil, cracking stocks	.02⅛	.02¼	.02⅛	.02¼
U.G.I. gas oil	.02⅛	.02¼	.02⅛	.02¼
32-36, zero to 15 gas oil	.02¾	.02⅞	.02¾	.02⅞
28-30, No. 3 burner oil	1.10	1.15	1.10	1.15
26 30, zero to 10 fuel oil	.95	1.00	.95	1.00
24-26 fuel oil	.77½	.80	.77½	.80
20-22 fuel oil	.72½	.75	.72½	.75
Below 16 fuel oil	.60	.62½	.60	.62½
NORTH TEXAS—				
32-36 gas oil, industrial	.02⅛	.02¼	.02⅛	.02¼
22-26 fuel oil	.67½	.70	.67½	.70
Below 20 fuel oil	.60	.62½	.60	.62½
NORTH LOUISIANA (Ark., N. La. & Miss. del.)—				
30-32 gas oil, zero	.03	.03⅛	.03⅛	.03¼
14-16 fuel oil	.70	.75	.70	.75
ARKANSAS (Ark., N. La. & Miss. del.)—				
30-32 gas oil, zero	.03	.03⅛	.03⅛	.03¼
32-36 gas oil	.02⅞	.03	.03	.03⅛
14-16 fuel oil	.70	.75	.70	.75
CHICAGO (based on Oklahoma Group 3)—				
32-36 gas oil, industrial	.02	.02⅛	.02	.02¼
28-30 zero to 10, fuel oil	1.05	1.10	1.05	1.07½
26-28 zero to 10, fuel oil	.95	1.00	.95	.97½
22-26 zero to 10, fuel oil	.82½	.87½	.82½	.87½
18-22 zero to 10, fuel oil	.67½	.72½	.67½	.72½
Below 18 fuel oil	.57½	.62½	.57½	.62½

Note: Fuel oils of more than 40 cold test generally 5 to 15 cents per barrel in all these areas.

PENNSYLVANIA (inland refineries)—				
30-40	.03¾	.04	.03⅝	.04
CALIFORNIA—				
Los Angeles:				
30-34 gas oil per bbl.	1.10	1.26	1.10	1.26
27 plus Diesel	1.10	1.15	1.10	1.15
27 plus Diesel (bunkers)	1.13	1.20	1.13	1.20
12-16 (bunkers at tidewater)	.82½	.85	.82½	.85
10-16 (cargo lots)	.70	.75	.70	.75
12-17 (tank cars)	.62½	.80	.62½	.80
San Joaquin Valley:				
10-18 (tank cars)	.60	.70	.60	.70
San Francisco:				
27 plus Diesel per bbl.	1.15	1.20	1.15	1.20
27 plus Diesel (bunkers)	1.19		1.19	
10-16 (bunkers)	.90		.90	
GULF COAST—				
28-30 gas oil	.03½	.03⅝	.03½	.03⅝
28-30 Diesel (bunkers)	1.70		1.70	
Bunker C (bulk cargoes)	.85	.90	.85	.90
Bunker C (bunkers)	.95	1.00	.95	1.00
NEW YORK (Bayonne, N. J.)—				
27 plus, gas oil	.04¾		04½	.04¾
28-30 Diesel (lighterage 6½ cents per bbl.)	1.89		1.89	
28-30 Diesel (tank cars)	.04¾		.04¾	
*Bunker C (to ocean-going ships in N. Y. harbor)	1.15		11.5	

*Lighterage charge 5 cents per barrel additional.

Neutral Oils

(Vis. at 100° F. except Pennsylvania, and color N.P.A.)

	Jan. 15	Jan. 8
OKLAHOMA (Group 3)—		
Zero to 10 Cold Test:		
150-3	.10	.10
180-3	.11¼	.11¼
180-4	.10¾	.10¾
200-3	.11¾	.11¾
200-4	.11¼	.11¼
240-3	.13¾	.13¾
240-4	.13¼	.13¼
280-3	.14¾	.14¾
280-4	.14	.14
300-3½	.15¼	.15¼
400-4	.17¼	.17¼
100-2 paraffin oil	.05¾	.05¾
15-20 Cold Test:		
200-3	.10¾	.10¾
200-4	.10¼	.10¼
240-3	.12¾	.12¾
240-4	.12¼	.12¼
280-3	.13¾	.13¾
280-4	.13	.13
GULF COAST—		
Pale Oils:		
200-3	.07¼ .07½	.07¼ .07½
300-3	.07½ .08	.07½ .08
500-3½	.08½ .09	.08½ .09
750-3½	.09 .09¼	.09 .09¼
1,200-3½	.09½ .09¾	.09½ .09¾
2,000-4	.09¾ .10	.09¾ .10
Red Oils:		
200-5-6	.07 .07¼	.07 .07¼
300-5-6	.07¼ .07½	.07¼ .07½
500-5-6	.08 .08½	.08 .08½
750	.08½ .09	.08½ .09
1,200-5-6	.09¼ .09½	.09¼ .09½
CALIFORNIA—		
Pale Oils:		
100-2½-3	.12½ .14½	.12½ .14½
200-2½-3	.12½ .14½	.12½ .14½
300-3-3½	.12½ .14½	.12½ .14½
350-3-4	.12½ .14½	.12½ .14½
400-3-4	.12½ .14½	.12½ .14½
450-3-4	.12½ .14½	.12½ .14½
550-3-4	.12½ .14½	.12½ .14½
600-3-4	.12½ .14½	.12½ .14½
Red Oils:		
200-4-5	.12½ .14½	.12½ .14½
300-5-6	.12½ .14½	.12½ .14½
350-5-6	.12½ .14½	.12½ .14½
400-5-6	.12½ .14½	.12½ .14½

450-5-6	.12½	.14½	.12½	.14½
500-5-6	.12½	.14½	.12½	.14½
600-5-6½	.12½	.14½	.12½	.14½
700-6½ plus	.12½	.14½	.12½	.14½
750-6½ plus	.12½	.14½	.12½	.14½
900-6½ plus	.12½	.14½	.12½	.14½
PENNSYLVANIA—				
150 vis. at 70° F., 3 color, 400-405 flash:				
Zero pour test	.24½	.25	.24½	.25
10 pour test	.23½	.24	.23½	.24
15 pour test	.23	.23½	.23	.23½
25 pour test	.22	.22½	.22	.22½
180 vis. at 70° F., 3 color:				
25 pour test	.24½	.25	.24½	.25
200 vis. at 70° F., 3 color:				
Zero pour test	.30½	.31	.30½	.31
10 pour test	.29½	.30	.29½	.30
15 pour test	.29	.29½	.29	.29½
25 pour test	.28	.28½	.28	.28½

Bright and Steam Refined Stocks

OKLAHOMA (Group 3)—	Jan. 15		Jan. 8	
Bright Stocks:				
190-200 D	.16½		.16½	
150-160 D, 0-10	.13½		.13½	
150-160 D, 10-25	.13		.13	
150-160 24-40	.12½		.12½	
150-160 E	.12½		.12½	
Steam refined:				
630 light green (treated)	.07½	.08	.07½	.08
600 light green (untreated)	.06	.08	.06	.08
600 dark green (untreated)	.04½	.07	.04½	.07
PENNSYLVANIA—				
Bright Stocks (Pennsylvania grade, No. 8 color, 145-50 at 210; 540-550 flash):				
10 pour test	.17½	.18½	.17½	.18½
15 pour test	.16½	.17½	.16½	.17½
20 pour test	.15	.16	.15	.16
25 pour test	.14½	.15½	.14½	.15½
Steam refined:				
600	.07¼	.08¼	.08	.09
650	.10	.11	.10	.11
600 Pennsylvania flash	.11	.12	.11	.12
630 flash	.16	.17	.16	.17
600 Warren E filtered	.12	.13	.12	.13

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—	Jan. 15		Jan. 8	
124-126 white crude scale	.03⅛	.03¼	.03⅛	.03¼
PENNSYLVANIA—				
122-124	.0310	.0315	.0315	.0320
124-126	.0315	.0320	.0320	.0325
NEW YORK—				
Wax (a.m.p.) in bags fully refined:				
120-122	.0420	.0430	.0420	.0430
123-125	.0440	.0460	.0440	.0460
125-127	.0445	.0470	.0445	.0470
130-132	.05	.0510	.05	.0510
133-135	.0545	.0570	.0545	.0570
135-137	.0570	.0595	.0570	.0595
124-126 crude scale	.03	.0310	.0305	.03125
Petrolatum in barrels in carload lots:				
Dark green	.01⅞		.01⅞	
Amber	.02⅞	.03	.02⅞	.03
Extra amber	.03	.03⅛	.03	.03⅛
Lily white	.06⅝	.06¾	.06⅝	.06¾
Snow white	.07¾	.07⅞	.07¾	.07⅞
Cream	.05⅝	.05¾	.05⅝	.05¾
CHICAGO (f.o.b. switching district)*—				
122-124 wax	.0490	.0500	.0490	.0500
125-127 wax	.0515	.0525	.0515	.0525
127-129 wax	.0530	.0540	.0530	.0540
130-132 wax	.0590	.0600	.0590	.0600
132-134 wax	.0615	.0625	.0615	.0625

*Cents per pound on carlot orders in burlap bags of 225 lbs. approx. Add 3° F. a.m.p.

Export Prices

GASOLINE

GULF COAST—	Jan. 15		Jan. 8	
U. S. Motor	.04½	.04⅝	.04⅛	.04¼
60-62 400	.04¾	.04⅞	.04¼	.04⅜
61-63 390	.04⅞	.05	.04½	.04⅝
64-66 375	.05	.05⅛	.04¾	.04⅞
LOS ANGELES, CALIF.—				
U. S. Motor grades:				
53-55 octane	.04	.04¼	.04	.04¼
55-65 octane	.04¼	.04½	.04¼	.04½
65-67 octane	.04½	.04¾	.04½	.04¾
67-69 octane	.04¾	.05	.04¾	.05
Above 69 octane	.05	.05¼	.05	.05¼
58-60 400 endpoint	.04¾	.05½	.04¾	.05½

KEROSENE

GULF COAST—				
41-43 prime white	.04¾	.04⅞	.04¼	.04⅜
41-43 water white	.04⅞	.05	.04½	.04⅝
44 water white	.05⅛	.05¼	.04¾	
LOS ANGELES, CALIF.—				
41-43 water white	.04½	.04¾	.04½	.04¾

LUBRICANTS

NEW YORK (f.a.s. in bbls.)—				
Cylinder Stocks:				
600 Warren E	.19	.20	.19	.20
600 S.R. unfiltered	.14½	.15	.14½	.15
650 S.R. unfiltered	.17	.18	.17	.18
600 flash S.R.	.18	.18½	.18	.18½
630 flash S.R.	.22½	.23	.22½	.23
Bright Stocks:				
8 color	.22½	.23	.22½	.23
6½ plus color, in dilution	.21	.21½	.21	.21½

NEUTRAL OILS

200-3 color	.34½	.35	.34½	.35
150-3 color	.28	.29	.28	.29

PARAFFIN WAX (Fully Refined)

NEW YORK (prices per pound):				
120-122 a.m.p.	.0405	.0425	.0405	.0425
123-125 a.m.p.	.0435	.0455	.0435	.0455
125-127 a.m.p.	.0440	.0465	.0440	.0465
128-130 a.m.p.	.04¾	.0490	.04¾	.0490
130-132 a.m.p.	.0495	.0505	.0495	.0505
133-135 a.m.p.	.0540	.0565	.0540	.0565
135-137 a.m.p.	.0565	.0590	.0565	.0590

Crude Oil Gravity Table

Gravity—	1 Oklahoma and Kansas	2 North Texas, Central Texas and East Central Texas	3 North Louisiana and Arkansas	4 Gray County, Texas	5 Carson, Hutchinson and Moore Counties, Texas	6 Conroe, Texas	7 Salt Creek, Wyo.	8 Gulf Coast, Texas and Louisiana	9 Gulf Coast, Texas and Louisiana	10 Cotton Valley, Louisiana
Below 20	....	....	....	....	....	....	....	$.83	$.83	....
20-20.9	....	....	....	....	....	....	....	.84	.84	....
21-21.9	....	....	....	....	....	....	....	.86	.86	....
22-22.9	....	....	....	....	....	....	....	.88	.88	....
23-23.9	....	....	....	....	....	....	....	.90	.90	....
24-24.9	....	....	....	....	....	....	....	.92	.92	....
Below 25	*$.76	....	....	....	....	....	....	....	....	$.70
25-25.9	*.76	....	....	....	....	....	....	.94	.94	.72
26-26.9	*.80	....	....	....	....	....	....	.96	.96	.74
27-27.9	*.82	....	....	....	....	....	....	.98	.98	.76
28-28.9	*.84	....	....	....	....	....	....	1.00	1.00	.78
Below 29	.84	$.79	$.79	....	....	....	$.84	....	....	....
29-29.9	.86	.81	.81	....	....	....	.86	1.02	1.02	.80
30-30.9	.88	.83	.83	....	....	....	.88	1.04	1.04	.82
31-31.9	.90	.85	.85	....	....	....	.90	1.06	1.06	.84
32-32.9	.92	.87	.87	....	....	....	.92	1.08	1.06	.86
33-33.9	.94	.89	.89	....	....	....	.94	1.10	1.07	.88
34-34.9	.96	.91	.91	....	....	....	.96	1.12	1.08	.90
Below 35	....	....	....	$.79	$.69	....	....	....	....	....
35-35.9	.98	.93	.93	.81	.71	$1.09	.98	1.12	1.09	.92
36-36.9	1.00	.95	.95	.83	.73	1.11	1.00	1.13	1.10	.94
37-37.9	1.02	.97	.97	.85	.75	1.13	1.02	1.12	1.11	.96
38-38.9	1.04	.99	.99	.87	.77	1.15	1.04	1.12	1.12	.98
39-39.9	1.06	1.01	1.01	.89	.79	1.17	1.06	1.13	1.13	1.00
40 and over	1.08	1.03	1.03	.91	.81	1.19	1.08	1.12	1.14	1.02

Effective December 3, Panhandle Refining Co., purchasing oil in North Texas, posted below 29 degrees, 68 cents; 29-29.9 degrees, 70 cents, with 2 cents added for each additional degree up to 40 and over, at 92 cents.

*The following companies purchasing crude oil in Kansas or Oklahoma, or both, begin their price schedule: Below 25°, 76 cents; 25-25.9°, 78 cents, with 2 cents added for each degree upward to 40 and over at $1.08; Carter Oil Co., Magnolia Petroleum Co., Pure Oil Co., Rock Island Refining Co., Shell Petroleum Corp., Sinclair Prairie Oil Marketing Co., Skelly Oil Co., and Wilcox Oil & Gas Co. All others begin their schedules at below 29°, 84 cents, excepting Phiitex Oil Co., which begins with below 31° at 88 cents.

Column 1—Effective September 29, Texas Co. of Oklahoma; Stanolind Crude Oil Purchasing Co. in Kansas and Oklahoma; Anderson & Prichard, Inc., in Oklahoma; Bell Oil & Gas Co. in Oklahoma; Carter Oil Co. in Oklahoma and Kansas; Deep Rock Oil Co. in Oklahoma; Derby Oil Co. in Kansas; Globe Refining Co. in Oklahoma; Golden Rule Refining Co. in Kansas; Gypsy Oil Co. in Oklahoma and Kansas; Kanotex Refining Co. in Kansas; Magnolia Petroleum Co. in Oklahoma; Mid-Continent Petroleum Corp. in Oklahoma; National Refining Co. in Kansas and Oklahoma; Shell Petroleum Corp. in Kansas and Oklahoma; Sinclair Prairie Oil Marketing Co. in Kansas and Oklahoma; Texas Co. in Oklahoma; Tide Water Oil Co. in Oklahoma; Vickers Refining Co. in Kansas; Continental Oil Co. in Kansas and Oklahoma; Empire Pipe Line Co. in Oklahoma and Kansas; Phiitex Oil Co. in Kansas and Oklahoma; Pure Oil Co. in Oklahoma; Skelly Oil Co. in Kansas. Effective September 29, by White Eagle Oil Corp. in Kansas; October 1 by Barnsdall Refineries, Inc., in Oklahoma.

Column 2—Effective September 29, by Texas Co., Stanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Sinclair Prairie Oil Marketing Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Bell Oil & Gas Co., Continental Oil Co. Effective January 14, 1935, in the Van Pool, Van Zandt County, Pure Oil Co. posted below 29°, 79 cents, with 2 cents added for each degree up to 40 and over at $1.03.

Column 3—Effective September 29, by Texas Co., Magnolia Petroleum Co., Gulf Refining Co. Effective December 22, Stanolind Oil & Gas Co. in Pine Island, Louisiana, and Marion County, Texas, posted below 39°, 79 cents, with 2 cents added for each degree up to 40 and over at $1.03. Effective March 17, 1934, by Standard Oil Co. of Louisiana and Louisiana Oil Refining Co. Starting with below 25°, 71 cents, adding 2 cents for each degree upward to 40 and over at $1.03.

Column 4—Effective September 29, by Texas Co., Humble Oil & Refining Co., Magnolia Petroleum Co., Sinclair Prairie Oil Marketing Co., and H. F. Wilcox Oil & Gas Co. On same day Phiitex Oil Co. posted below 31°, 71 cents, with 2 cents added for each degree up to 40 and over at 91 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 5—Effective September 29, by Texas Co., Humble Oil & Refining Co., Gulf Pipe Line Co., Magnolia Petroleum Co., Wilcox Oil & Gas Co., Continental Oil Co. On same day, Phiitex Oil Co. posted below 31°, 61 cents, with 2 cents added for each degree upward to 40 and over at 81 cents. Effective June 1, 1934, Texas Co. (see note above).

Column 6—Effective September 29, by Humble Oil & Refining Co. and Tide Water Oil Co., and on September 30, by Texas Co., which on September 29 had posted a schedule of $1.07 to $1.12 with a 1-cent spread on each degree.

Column 7—Effective September 29, by Stanolind Oil & Gas Co.

Column 8—Effective September 29, by Humble Oil & Refining Co., Gulf Pipe Line Co., Shell Petroleum Corp., Pure Oil Co., Sinclair Prairie Oil Marketing Co. On October 2, Magnolia Petroleum Co. posted Lockport, Louisiana; 20-20.9°, 84 cents, with 2 cents added for each degree upward to 34 and over at $1.12, and in Cameron Meadows and Iowa, Louisiana; below 20°, 72 cents, with 2 cents added for each degree up to 34 and over at $1.02. These prices were 2 cents higher on each degree than Magnolia prices posted on September 29. Effective September 29, Shell Petroleum Corp. posted in Iowa, Louisiana, district: Below 20°, 70 cents, with 2 cents added for each degree upward to 34° and over at $1; and in Black Bayou and White Castle, Louisiana: Below 20°, 80 cents, with 2 cents added for each degree upward to 34° and over at $1.10.

Column 9—Effective September 30, Texas Co. (On September 29, Texas Co. had posted a schedule of 2 cents on each degree, but changed it on September 30.)

Column 10—Effective September 29, by Louisiana Oil Refining Co.

(California Crude Oil Prices on Page 35)

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas $1.00
Corsicana (heavy) (June 17, 1933)*... .80
Other fields..... (See gravity table)

Note—In East Texas, effective September 29, 1933, by Texas Co., Sanolind Crude Oil Purchasing Co., Humble Oil & Refining Co., Shell Petroleum Corp., Gulf Pipe Line Co., Tide Water Oil Co., Sinclair Prairie Oil Marketing Co., Magnolia Petroleum Co., Sun Oil Co., Panola Pipe Line Co., Empire Oil & Refining Co., and Atlas Pipe Line Co. posted 60 cents per barrel in East Texas, but on November 3 resumed its posted price of $1 per barrel, making it retroactive to October 22.

*Magnolia Petroleum Co.

West Texas

Crane, Upton, Crockett, Howard, Glasscock, Mitchell (Sept. 29, 1933) ..... $.70
Ector, Winkler and Pecos Counties and Lea County, New Mexico (Sept. 29, 1933) ..... .75
Pecos County, Yates shallow Pool (Sept. 29, 1933)* 65
Jones and Fisher Counties*. See gravity table

Note—Effective September 29, 1933, by Humble Oil & Refining Co., Texas Co., Gulf Pipe Line Co., Shell Petroleum Corp., Magnolia Petroleum Co., and by Stanolind Oil & Gas Co. in Winkler County, Texas.

*Shell Petroleum Corp.

Gulf Coast

Grade A and Grade B specifications discontinued by leading buyers. ..... (See gravity table)
Tomball (see note)*..... $1.15
Livingston (Sept. 29, 1933)† 1.00
Cleveland (Jan. 11, 1934) 1.00
Greta (Sept. 29, 1933) ..... .85
Refugio, light .....(See gravity table)
Refugio, heavy (Sept. 29, 1933)‡..... .85
Markham and High Island..... (See Gulf Coast gravity table)
Conroe.....(See Conroe gravity table)
Bosco, La. (Oct. 15, 1934)§..... $1.02

Note—Tomball, effective September 29, by Humble Oil & Refining Co. and October 2 by Magnolia Petroleum Co., and November 10 by Stanolind Crude Oil Purchasing Co

*Greta posted by Texas Co. †Shell Petroleum Corp. ‡Refugio heavy by Humble Oil & Refining Co. Cleveland (Liberty County) posted by Magnolia Petroleum Co. §Bosco posted by Pure Oil Co.

South Central and Southwest Texas

(See note below table)

Darst Creek ..... $.87
Mirando ..... .80
Luling (Sept. 29, 1933) ..... .75
Pettus 1.05
Salt Flat ..... .87
Lytton Springs (Sept. 29, 1933)..... .95
Duval County (Sept. 29, 1933)..... .80
Saxet ..... .85

Note—Effective on September 29 by Humble Oil & Refining Co. in Darst Creek, Mirando, Pettus, Salt Flat and Saxet. Effective September 29 in Darst Creek by Gulf Pipe Line Co. and Texas Co. Effective October 2 by Magnolia Petroleum Co. Effective in Pettus and Salt Flat on September 29 by Humble Oil & Refining Co. and Gulf Pipe Line Co. Luling and Lytton Springs by Magnolia Petroleum Co. Duval County by Texas Co. Saxet, effective September 29, by

(Continued on Page 35)

TANK WAGON MARKETS

Quotations for gasoline and kerosene in United States, as furnished by the larger marketing concerns, include taxes

January 15, 1935

Taxes

The gasoline quotations given in the following tables include the 1-cent Federal tax, as well as state, county and city taxes. The gasoline quoted is the regular or standard grade. In most marketing areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank wagon or 2 cents a gallon off retail prices is permitted for purchases running between 4,000 and 10,000 gallons a month, or 4 cents a gallon off retail prices for purchase in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax	tank wagon
Denver, Colo.	18.0	20 0	5.0	13.6
Pueblo	18 0	20.0	5.0	13.0
Grand Junction	18 5	20.5	5.0	15.0
Casper, Wyo.	18.0	20.0	5.0	11.5
Cheyenne	18.0	20.0	5.0	13.0
Butte, Mont.	21.0	23.0	5.0	17.5
Billings	22 0	24 0	6 0	16.5
Helena	23.0	25.0	6.0	17.5
Great Falls	21.5	23.5	6.0	17.5
Salt Lake, Utah	21.0	23.0	5.0	16.0
Boise, Idaho	22.5	24.5	6.0	18.0
Twin Falls	22.5	24.5	6.0	18.0
Albu'que, N. M.	17.5	19.5	*6.5	13.0

*One-half cent city tax.

Effective March 1, 1934, discount to dealers with or without contract throughout Continental territory: Undivided dealer discount off service station price, 4 cents; divided dealer accounts, 3½ cents.

Standard Oil Co. (Indiana)

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax	tank wagon
Chicago	14 6	16.6	4.0	8.0
Decatur, Ill.	14.4	12.7	4.0	10.2
E. St. Louis	14.1	11.0	4.0	9.5
Joliet	14.5	16.5	4.0	10.2
Peoria	14.7	13.5	4.0	10.2
Quincy	15.9	14.9	4.0	10.0
Davenport, Ia.	14.2	14.0	4.0	10.1
Des Moines	14.1	16.1	4.0	10.1
Mason City	14.4	16.4	4.0	10.1
Sioux City	14.3	16.3	4.0	9.7
Duluth, Minn.	15.0	17.0	4.0	10.4
Mankato	14.7	16.7	4.0	9.5
Minneapolis	15.0	17.0	4.0	10.4
LaCrosse, Wis.	15.7	17.7	4.0	10.8
Green Bay	15.9	17.9	5.0	10.2
Milwaukee	15.8	17.8	5.0	9.0
Madison	16.0	18.0	5.0	9.9
Detroit, Mich.	15.0	17.0	4.0	10.5
Grand Rapids	14.7	16.7	4.0	10.2
Saginaw	15.0	17.0	4.0	10.5
Evansville, Ind.	16.3	14.9	5.0	10.0
Indianapolis	16.1	18.1	5.0	10.2
South Bend	16.4	18.4	5.0	9.0
Fargo, N. Dak.	15.7	17.7	4.0	11.4
Huron, S. Dak.	16.2	18.2	5.0	11.4
Sioux Falls	15.6	17.6	5.0	10.9
Kans. C., Mo.*	13.6	15.6	4.0	7.5
Springfield	13.3	15.3	4.0	8.8
St. Louis	12.7	12.5	3.5	8.7
St. Joseph*	13.6	15.6	4.0	7.8
Wichita, Kans.	13.2	15.2	4.0	7.5
Bartlesville, Ok.	16.7	18.2	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent federal tax.

Discounts to dealers: Undivided accounts, 3½ cents on premium and regular and 2½ cents on third grade off service station prices; divided accounts one-half cent less than undivided. Where prices are more than 1 cent below normal, the discounts are one-half cent less than above.

Naphtha

	Tank wagon*
Oleum spirits	16.7
V.M.&P. naphtha	18.0
Cleaners' naphtha	18.0
Stanisol	18.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax nor 2 per cent retail occupational tax.

Prices f.o.b. Chicago, January 5, 1935. Each of above prices subject to discount of 1 cent per gallon for 150-gallon lots if covered by contracts.

Stanolex Furnace Oil in Chicago

Effective Jan. 2, 1935, f.o.b. Chicago tank wagon prices: Range oil, less than 80 gallons, 8¼ cents; 80-149 gallons, 7½ cents; 150 gallons and more, 7 cents. No. 1 (36-40 lt. stw. zero), less than 100 gallons, 8¼ cents; 100-149 gallons, 7½ cents; 150 gallons or more, 6¾ cents; No. 2 (30-34, stw. zero), less than 150 gallons, 7¾ cents; No. 3 (22-26, zero), less than 150 gallons, 7 cents; No. 4 (12-16 zero), less than 400 gallons, 7 cents; viscosity of No. 4, 85 at 100° F.; No. 5, less than 400 gallons, 5¾ cents. For deliveries of more than stated quantities of Nos. 2, 3, 4 and 5, deduct 1 cent.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax	tank wagon
Atlanta, Ga.	19.0	21.0	7.0	14.5
Augusta	18.5	20.0	7.0	14.5
Macon	19.0	21.0	7.0	14.5
Savannah	17.5	19.5	7.0	14.0
Birm'ham, Ala.	19.5	21.5	8.0	14.0
Mobile	17.0	18.0	8.0	12.0
Montgomery	18.5	19.5	8.0	15.0
Jackson, Miss.	18.5	20.5	7.0	13.0
Vicksburg	18.0	19.5	7.0	12.0
Jack'ville, Fla.	18.0	20.0	8.0	11.5
Miami	18.0	20.0	8.0	13.5
Pensacola	19.0	21.0	8.0	13.5
Tampa	18.0	20.0	8.0	12.5
Lexington, Ky.	16.5	18.5	6.0	12.5
Covington	14.5	16.5	6.0	11.5
Louisville	15.5	16.5	6.0	11.0
Paducah	14.5	15.5	6.0	11.0

In addition to the state tax of 4 cents on gasoline, Montgomery has city and county tax of 2 cents on gasoline and one-half cent on kerosene. Kerosene prices in Georgia and Mississippi include 1 cent state tax; in Alabama, an inspection fee of one-half cent on kerosene and one-fortieth cent on gasoline; in Florida an inspection fee of one-eighth cent on kerosene and gasoline. To Pensacola, Mobile and Birmingham state taxes on gasoline add 1 cent city tax.

Southwestern District

MAGNOLIA PETROLEUM CO.

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax	tank wagon
Dallas, Tex.	11 0	13.0	5 0	7.0
Fort Worth	11.0	13.0	5.0	7.0
Houston	15.0	17.0	5.0	7.0
San Antonio	16.0	18.0	6.0	9.5
El Paso	18.0	20.0	5.0	12.0
Muskogee, Ok.	16.0	18 0	5.0	7.5
Okla. City	16.0	18 0	5 0	7.5
Tulsa	16.0	18.0	5.0	7.5
Ft. Smith, Ark.	14.1	16.5	5.0	9.0
Little Rock	16.6	19.0	7.5	9.0
Texarkana	14.0	16.0	5 0	7.0

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax	tank wagon
Atl'tic City, N.J.	12.9	16.4	4.0	9.0
Newark	12.2	15.7	4.0	8.5
Annapolis, Md.	14.5	18.0	5.0	10.0
Baltimore	14.0	17.5	5.0	8.5
Cumberland	15.0	18.5	5.0	12.7
Wash'g'n, D. C.	12.0	15.5	3.0	11.5
Danville, Va.	16.5	20.0	6.0	12.9
Norfolk	15.0	18.5	6.0	11.3
Petersburg	15.5	19.0	6.0	11.4
Richmond	15.5	19.0	6.0	11.7
Roanoke	16.5	20.0	6.0	12.9
Charle'n, W.Va.	15.0	18.5	5.0	13.6
Parkersburg	14.5	18.0	5.0	11.2
Wheeling	14.0	17.5	5.0	12.2
Charlotte, N. C.	16.0	19.0	7.0	13.5
Hickory	16.5	19.5	7.0	13.7
Mt. Airy	17.0	20.0	7.0	13.8
Raleigh	16.5	19.5	7.0	13.3
Salisbury	16.5	19.0	7.0	13.6
Charleston, S.C.	15.2	18.7	7.0	11.3
Columbia	16.5	19.5	7.0	13.2
Spartanburg	17.4	20.9	7.0	13.5

Effective October 23, tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax	tank wagon
Omaha	15.9	17.9	5.0	10.0
McCook	16.6	16.9	5.0	10.7
Norfolk	16.3	18.3	6.0	10.4
North Platte	16.7	17.7	5.0	10.0
Scottsbluff	17.4	19.4	5.0	11.5

Note: Discounts to dealers; where service station gasoline prices are (maximum overall, including rent) as follows: Reliance, 2½ cents; Standard Red Crown, 3½ cents; Red Crown Ethyl, 3½ cents.

Where service station gasoline prices are below normal, resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall, including rent): Reliance, 2 cents; Standard Red Corwn, 3 cents; Red Crown Ethyl, 3 cents. Discounts to consumers for tank wagon deliveries covered only by Standard Commercial Consumers Contract, effective Jan. 1, 1935.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax	tank wagon
N. Orleans, La.	15.5	19.0	‡8¢0	9.0
Baton Rouge	14.2	17.7	6.0	12.0
Alexandria	15.1	18.6	*7.0	12.0
Lafayette	16.3	19.8	‡*8.0	12.0
Lake Charles	15.2	18.7	*7.0	12.0
Shreveport	14.0	17.5	†7.0	12.0
Knoxville, Tenn.	18.7	22.2	8.0	13.5
Memphis	17.0	20.5	8.0	10.5
Chattanooga	18.5	22.0	8.0	11.0
Nashville	18.0	21.5	8.0	12.0
Bristol	17.0	20.5	8.0	14.0

*Includes city tax of 1 cent. Louisiana kerosene prices include 1-cent state tax. ‡Includes 2-cent parish tax. †Includes 1-cent parish tax.

Effective October 23, tank wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline			Kero-
	Tank wagon†	Posted retail	Incl'ds tax	tank wagon
San Francisco	16.5	18.5	4.0	12.5
Los Angeles	15.5	17.5	4.0	12.5
Fresno, Calif.	17.0	19.0	4.0	14.0
Phoenix, Ariz.	15.0	17.0	6.0	‡16.0
Reno, Nev.	19.0	21.0	6.0	15.5
Portland, Ore.	19.0	21.0	6.0	13.5
Seattle, Wash.	19.0	21.0	6.0	13.5
Tacoma	19.0	21.0	6.0	13.5
Spokane	22.0	24.0	6.0	18.0

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank wagon lots except in Phoenix where the discount is 1 cent.

‡Includes 5-cent state tax.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax	tank wagon
Phil'delphia, Pa.	14.0	16.0	4.0	9.0
Pittsburgh	15.0	17.0	4.0	10.0
Allentown	14.5	16.5	4.0	10.0
Erie	12.5	12.5	4.0	9.0
Scranton	15.0	17.0	4.0	10.0
Altoona	15.0	17.0	4.0	10.0
Dover, Del.	14.5	16.5	4.0	10.0
Wilmington	14.5	16.5	4.0	9.0
Springf'd, Mass	13.0	16.0	4.0	8.5
Worcester	13.0	16.5	4.0	9.0
Hartford, Conn.	13.0	16.5	3.0	8.0
New Haven	13.0	16 5	3.0	8.5
Providence, R.I.	11.5	15.0	3.0	8.5

Note—Tank wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

Canada*

Imperial 3-Star Gasoline

IMPERIAL OIL, LTD.

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax	tank wagon
Hamilton, Ont.	†22.0	25.0	6.0	17.5
Toronto, Ont.	†22.0	25.0	6.0	17.5
Brandon, Man.	30.3	33.3	7.0	21.5
Winnipeg, Man.	28.7	31.7	7.0	20.3
Regina, Sask.	29.0	32.0	6.0	21.5
Saskatoon, Sask.	31.8	34.8	6.0	24.2
Edmonton, Alta.	31.2	34.2	6.0	22.7
Calgary, Alta.	28.5	31.5	6.0	21.0
Vancouver, B.C.	27.0	30.0	7.0	24.0
Montreal, Que.	24.0	27.0	6.0	17.0
St. John, N.B.	26.0	30.0	8.0	19.5
Halifax, N. S.	26.0	30.0	8.0	19.5

*Imperial gallon used in Canada. †Governed by service station price.

Maritime provinces, all dealers 4 cents off service station price. All other provinces open dealers 3 cents per gallon off service station price (except Toronto and Hamilton cities which are—open dealers 2½ cents off service station price) 1 cent additional to 100 per cent accounts.

New York and New England

SOCONY-VACUUM CO., INC.

	Gasoline			Kero-
	Posted dealer	Service station	Incl'ds tax	tank wagon
Albany, N. Y.	13.0	16.5	4.0	8.5
Met. New York	12.5	16.0	4.0	8.5
Br'klyn, Queens	12.5	16.0	4.0	8.5
Buffalo	13.5	17.0	4.0	8.0
Rochester	13.5	17.0	4.0	8.5
Syracuse	13.5	17.0	4.0	8.75
Boston, Mass	12.5	16.0	4.0	8.5
Portland, Me.	14.5	18.0	5.0	8.75
Manch't'r, N.H.	12.0	14.0	5.0	9.0
Burlington, Vt.	16.0	19.5	5.0	9.0

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero-
	Tank wagon	Service station	Incl'ds tax	tank wagon
Ohio points	15.5	17.5	5.0	*13.5

*Includes state tax of 1 cent, effective July 22.

Retail Price Changes

Regular-Grade Gasoline and Kerosene

Standard Oil Co. of Louisiana, December 22, reduced tank wagon kerosene 1 cent in New Orleans. January 9, advanced tank wagon gasoline 2.5 cents and station gasoline 3.5 cents in Bristol.*

Standard Oil Co. of Indiana, December 18, advanced station gasoline 4 cents in Peoria. December 20, advanced station gasoline 2.8 cents in Decatur. December 29, advanced tank wagon gasoline 3 cents in Quincy.

Standard Oil Co. of Nebraska, January 3, reduced tank wagon kerosene 0.8 cent in North Platte. January 4, reduced station gasoline 0.7 cent in McCook.

Standard Oil Co. of New Jersey, January 1, advanced tank wagon gasoline one-half cent and station gasoline 1 cent in Hickory and Raleigh. Jauary 2, advanced tank wagon and station gasoline 1 cent in Salisbury. January 2, advanced station gasoline one-half cent in Cumberland.

Atlantic Refining Co., January 4, reduced tank wagon kerosene one-half cent in Hartford. January 9, advanced tank wagon and station gasoline 1.5 cents in Erie.

Magnolia Petroleum Co., January 8, reduced tank wagon kerosene 1 cent in Houston. January 10, advanced tank wagon and station gasoline 1 cent in Muskogee, Oklahoma City and Tulsa. January 10, advanced tank wagon kerosene 1.5 cents in Muskogee and one-half cent in Oklahoma City. January 11, reduced tank wagon kerosene 2.5 cents in Dallas and Texarkana and 1 cent in Fort Worth.

Continental Oil Co., January 8, advanced tank wagon and station gasoline 2 cents in Salt Lake City. January 14, advanced tank wagon and station gasoline 2.5 cents in Grand Junction. January 14, advanced tank wagon kerosene one-half cent in Denver and 2 cents in Pueblo.

CRUDE OIL PRICE CHANGES

Effective January 14, Pure Oil Co. reduced its price for Van, Tex., crude 5 cents per barrel, making its price schedule the same as in North Central Texas and the Mexia district. It had been on the schedule that prevailed in Oklahoma and Kansas with $1.08 top for 40 gravity and over. Now the top is $1.03.

GEORGE L. PRICHARD DIES

PITTSBURGH, Pa., Jan. 14.—George L. Prichard, 55, general manager of manufacturing for the Gulf Refining Co., died suddenly at his suburban home, apparently from a heart ailment.

A native of Philadelphia, Mr. Prichard came here in 1928 to assume the position he held at his death. He was in charge of all the company's refining operations. He began his business career with the Atlantic Refining Co., but later joined the Gulf company and was for a time general superintendent of its plant at Port Arthur, Tex.

NEWS FOR SALES DEPARTMENTS

Upturn Reported in 1934 Motor Car Registration

The 1934 increase in motor car registration which is the first gain since 1929, has been reflected in an increased market for products of the closely affiliated petroleum industry. According to figures computed by "Motor," the motor car industry is well on its way back. With 1,000,000 cars scrapped in 1934, the total increase in registration was 900,000 cars. Registration figures compiled from official sources in every state show that there were 21,505,097 passenger cars on American roads in 1934. Besides there were 3,421,088 trucks registered as of December 31, a total of 24,926,185 cars. This represents a gain of 4.6 per cent for passenger cars and 6 per cent for trucks.

There were 1,616,492 fewer cars in use in 1934 than at the peak in 1929, but the number of trucks in operation was only 64,931 smaller than in the biggest commercial vehicle year, which was 1930. Only 259,272 trucks had gone out of service at the bottom of the depression, but there had been a shrinkage of 2,521,046 in passenger cars.

TAX RULINGS INTERPRETED

In response to an inquiry by the American Petroleum Industries Committee, the Bureau of Internal Revenue has ruled as follows on the taxability of petroleum products sold to states and political subdivisions thereof in connection with construction and maintenance of sewers and sewage disposal systems and garbage collection:

Gasoline and lubricating oil sales made to the parties named, for construction of sewers are subject to taxation, but when sold for the maintenance and operation of sewers and sewage disposal systems and the collection of garbage and rubbish are exempt from taxation.

OIL MADE RECORD POSSIBLE

When the Chicago and North Western "400" train rolled into the station at St. Paul, Minn., one and one-half minute ahead of its mile-a-minute schedule the triumph was one for oil as well as railroad management. The road chose to show that the conventional steam driven engines could compete favorably with the Diesel-driven so-called "high-speed" trains so much has been heard about in the past year. After carefully preparing every phase of the trip the record run was made.

It was necessary to convert the coal-burning equipment to oil, however, in order to lessen the number of stops for refueling, and it was also necessary to investigate new types of lubricants. The Standard Oil Co. of Indiana co-operated in preparing for the trip and supplied the products in making the record run.

Using this incident as an example, it becomes more evident that oil will be the fuel of the future as speedier travel on rail is developed, whether the propelling engine be of the internal combustion type or more like the conventional boiler and steam expansion type.

FOUND GUILTY

NEW YORK, Jan. 12.—Abe Siegel, president of Siegel Brothers, Inc., operating a gasoline service station here, was today found guilty in a court of special sessions, in the Bronx, on a charge of price cutting.

It was charged that Siegel posted one price for gasoline at his pumps, and sold at a different price to preferred customers, thereby violating Article 5, Rule 3, Paragraphs 4 and 7 of the code of fair competition for the Petroleum industry.

S.O.N.J. TO EXPEND $70,000,000 IN 1935

The capital expenditure of Standard Oil Co. (New Jersey) in the United States for 1935 of from $66,000,000 to $73,000,000 will exceed that for 1934 by about 6 per cent if the larger estimate is realized.

Of the total expenditure, between $50,000,000 and $56,000,000 will be expended upon facilities in this country, while $17,000,000 will be spent in the United States for steel, pipe, machinery and other construction materials to be sent abroad.

The largest expenditure will be made in the oil fields. Plans for pipe lines and for the development of crude oil production will involve an outlay of more than $36,000,000.

In addition to the capital expenditure, there is a considerable sum required for maintenance of existing equipment.

GULF EXPANDS IN ALABAMA

The expenditure of several thousand dollars has been made by the Gulf Refining Co. in the establishment of a water terminal and several bulk plants in Alabama. A modern barge, the "Creek" will ply the Warrior and Alabama Rivers serving the inland bulk plants. From these points, trucks will deliver gasoline to the distributing centers.

Gasoline Consumption Up But Prices Continue Low

TORONTO, Ontario, Jan. 12.—In a statement covering 1934 refining conditions in Canada, issued this week, G. Harrison Smith, president of Imperial Oil, Ltd., and International Petroleum Co., Ltd., says: "The consumption of petroleum products in Canada increased moderately during 1934 in keeping with the apparent recovery of industry. The price structure, however, continued to be influenced by conditions in the United States, where excessive production of crude oil and continued evasion of gasoline taxes were reflected in sporadic price wars. Canada's major oil companies have to operate so as to insure continuity of supply and, therefore, cannot shop about for odd lots of bargain products. Consequently, it was difficult for them to make satisfactory earnings. In the case of Imperial Oil, Ltd., profits from domestic business were only about one-quarter of what they were in 1929. Returns from investments and from activities in world trade were fortunately increased.

"Consumption of petroleum products declined in Canada during the depression, but not to the same extent as demand declined for many other important commodities. As a result the Canadian petroleum industry has not so much to regain in the way of volume of sales as have some other industries. That gasoline sales held up so well during the past four years is undoubtedly due in part to the low prices which have prevailed. On the 1913 basis gasoline prices are still lower even than prices of farm products. The figures for the first eight months of 1934 based on Dominion Bureau of Statistics reports are: Gasoline, 72.9 per cent of the 1913 wholesale level; farm products, 92.5 per cent; all commodities, 11.9 per cent."

CURB PUMPS HALTED

TORONTO, Ontario, Jan. 12.—Plans of the Toronto city council to secure legislation legalizing 313 gasoline curb pumps in various parts of the city have been halted by a distributing company which is taking action to enforce the removal of such pumps. Last fall a decision by Chief Justice Rose held that the city council had no power to give any individual rights on the city streets; but it has been planned to secure a special act of the legislature validating pumps already established.

GASOLINE INQUIRY ASKED

TORONTO, Ontario, Jan. 12.—On the authority of the provincial government, T. B. McQuesten, minister of highways, has formally requested an investigation by the federal Price Spreads Commission into recent increases in the price of gasoline. Chairman Kennedy of the commission has already intimated that it will be impossible to investigate the gasoline industry before the commission reports to parliament.

LARGER CALIFORNIA SHIPMENTS

LOS ANGELES, Calif., Jan. 12.—Impetus was given this week to San Pedro's petroleum shipments to other parts of the world when the new Norwegian tanker Maridal loaded 72,000 bbls. of gasoline for Australia, and the Norwegian tanker Storanger passed down channel with 72,000 bbls. of fuel oil for the Antarctic.

The Storanger's 72,000-bbl. cargo of fuel oil, loaded at Shell docks here, is consigned to the whaling fleet in the Antarctic.

BURNER MEN MEET

The board of directors of the American Oil Burner Association held its regular quarterly meeting at the Hotel Statler in Detroit, Mich., on Tuesday, January 8.

The question of the Oil Burner Show was discussed and it was decided that the character of the show would be changed in such manner that it will be designed solely for consumer merchandising purposes.

The annual meeting of the association will be held in Atlantic City in April, the sessions scheduled over a two day period. Complete details as to time and place will be announced later.

ONTARIO GASOLINE TAX

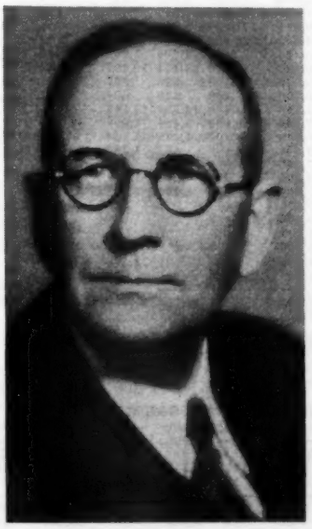
TORONTO, Ontario, Jan. 12.—The Ontario gasoline tax in November and December, 1934, yielded $617,729.48 increase in comparison with the same period of 1933; while gasoline tax refunds decreased $107,709.93 in the same period. The increase is credited in part to increased auditing vigilance and in part to the elimination of bootleggers and those who attempt to dodge the tax by gasoline adulteration.

ONE CENT COUNTY TAX

A 1 cent a gallon tax on gasoline for county purposes was suggested by County Judge Frost Woodhull after his proposal for a 15-cent increase on the road and bridge fund levy had drawn opposition from O. M. Fitzhugh, secretary of the Taxpayers League.

Judge Woodhull said the County Judges Association would introduce a bill in the fourty-fourth legislature providing for a 1-cent tax on gasoline for the use of counties throughout Texas. He said he personally favored the plan.

V H. KELLY « « «



V. H. KELLY, director of domestic sales for the Union Oil Company of California, is one of those untiring executives who came up from the ranks. His services in the Union Oil Company started in 1913 when he took the job of salesman in Tacoma, Wash. His sound marketing practices attracted the home office and he was given the title of special agent and was moved to Seattle, Wash. Within the 21 years which followed he was made manager of the Portland office, district manager of the Seattle offices and then manager of the entire northern district.

His ability to organize and push sales in a conservative and business-like manner during a time when so many novel and untried practices promised quicker results for the moment won for him the office which he now holds.

From his offices in Los Angeles he directs the sales of the company throughout its Pacific Coast territory. All products of the company's five refineries intended for domestic consumption pass through his hands for distribution through the company owned filling stations and jobbers. The company does not operate affiliated marketing companies.

Until the dissolution of the Union Service Stations, Inc., a few months ago, Mr. Kelly was vice president in charge of all sales for that organization. In this capacity he was responsible for all sales of the affiliated company including those made for export delivery.

NATURAL GASOLINE MANUFACTURE

Construction to Begin on New Gulf Coast Terminal

HOUSTON, Tex., Jan. 14.—General American Tank Storage & Terminal Co. has acquired a site of 50 acres fronting on the Houston Ship Channel east of Houston and will start immediately the construction of a tank farm and loading terminal. This is expected to be completed in April.

The initial unit of the tank farm will have a capacity of 500,000 bbls. Although various liquid products will be handled through the terminal, natural gasoline, crude and refinery products will make up the bulk of the business.

Announcement also has been made that the company will double the capacity of its terminal at Corpus Christi, Tex., and will increase its New York terminal from 500,000 bbls. to 900,000 bbls. capacity.

SAFETY CHAPTER MEETS

Oil field workers and guests numbering 125 attended a meeting of the Burbank safety chapter at the Phillips No. 1 camp in the Burbank, Okla., area, Thursday night, January 10. Preceding the round table discussion led by R. V. Mertz, chemist at Phillips No. 2 natural gasoline plant; S. I. Betser, repressuring engineer for the production department, discussed "Gas Lift," and E. B. Pope of Webb City talked on vocational training. Other speakers were M. B. Nelson, superintendent of Webb City-Shidler schools, and Glen Davis, Webb City teacher. S. H. Morris was chairman of the meeting.

START NEW PLANT

MUSKEGON, Mich., Jan. 12.—The Apex Gasoline Co. started operations of its new casinghead gasoline plant in Section 17, Porter Township, in the heart of the largest central Michigan oil field last week.

The plant has a capacity of about 10,000,000 feet of gas daily and expects to manufacture at least 6,000 gallons of natural gasoline daily from a flow of about 6,000,000 feet of gas, or at a recovery of 1 gallon per 1,000 feet.

Residue gas is being utilized by the Dow Chemical Co., of Midland, to which a 14-mile 6-inch line recently was laid. The company also has laid several miles of gathering lines to large producing leases in the Porter Pool. James Hutton is general superintendent. Gas will be used for boiler fuel by the Dow company.

NEW LIQUEFIED GAS PLANT

Gas-Oil Products, Inc., of Philadelphia, Pa., is building a liquefied gas plant at Lucinda, Pa., utilizing a high-pressure fractionating system supplied with artificial refrigeration. The plant will be completed shortly, the design and engineering work being done by the Burrell-Mase Engineering Co.

EMPIRE STABILIZER

The Empire Oil & Refining Co. is adding a Burrell-Mase stabilizer to its natural gasoline recovery plant at Burrton, Kan.

NEW TANK COMPLETED

H. W. Snowden has completed a 55,000-bbl. tank across from the commission headquarters in Kilgore. Snowden has production in the Kilgore Township.

NEW EAST TEXAS PLANT

A natural gasoline plant is to be built on a two-acre tract on the Willis Smith farm in the J. S. Carruthers Survey, Gregg County, Texas. The capacity of the plant has not been announced. Fred Bowen is the builder.

Winter Demand for More Volatile Motor Fuel Draws on Natural Gasoline Stocks

Natural gasoline production in the United States for November amounted to 134,900,000 gallons, a decrease from the October total of 136,000,000 gallons, according to the U. S. Bureau of Mines. Although the total production in November was slightly below that of October, the daily average increased from 4,390,000 gallons to 4,500,000 gallons. This marked the sixth successive increase in daily average production, and the outlook for the industry appeared promising.

In spite of the gain in daily average production, a total of 143,031,000 gallons or 3,405,500 bbls. of natural gasoline were moved from plants to decrease stocks 8,131,000 gallons during the month. This sharp stock withdrawal was in accordance with the upward seasonal swing in demand for motor blends of higher volatility.

Stock drainage was most pronounced in Oklahoma, due primarily to the 3,585,000 gallons taken from Oklahoma City, and 1,300,000 gallons from Seminole. The Panhandle Field of Texas, with the largest plant storage in the United States maintained practically the same stock level throughout the month.

Production in the Panhandle again increased in November to establish a new record of 25,500,000 gallons from about 62,000,000,000 cubic feet of gas treated. Most of the other major producing fields recorded increases in output, Kettleman Hills being an outstanding exception. Other notable decreases were made in Huntington Beach, East Texas and the Rocky Mountain area. During the 11 months' period in 1934, the Panhandle Field has increased production 40 per cent over 1933; and East Texas, although of much shallower caliber, has jumped its output 132 per cent.

The monthly increase in utilization of natural gasoline is graphically shown in the report on production of motor fuels. The brisk movement from plant storage was largely absorbed by refiners who blended 3,399,000 bbls. as compared to 3,033,000 bbls. in October. Natural gasoline composed 8.5 per cent of the October motor fuel, while November gasoline contained 8.9 per cent.

Compared with conditions of a year ago, natural gasoline appears much stronger. Stocks during November of 1933 increased for the first time in seven months, and although the total stocks at gasoline plants were smaller than they are at present, the increase is in direct proportion with the added production.

The tables below are from the monthly report of the Bureau of Mines.

PRODUCTION AND STOCKS BY FIELDS
(Thousands of gallons)

	Production Nov., 1934	Production Oct., 1934	Production Jan.-Nov., 1934	Production Jan.-Nov., 1933	Stocks end of month Nov., 1934	Stocks end of month Oct., 1934	Nov., 1934 Used at refineries	Nov., 1934 Naphtha purchased for blending
East Coast	.....	.....	.....	.....	.....	.....	11,088	....
Appalachian	5,300	4,400	48,400	50,700	1,706	1,708	1,680	79
Ill., Ky., Mich.	800	700	7,200	7,600	241	235	12,348	2
Oklahoma	31,300	31,500	326,300	328,900	11,761	17,705	19,740	162
Oklahoma City	9,600	9,000	93,900	86,600	4,057	7,642	(*)	10
Osage County	4,200	4,400	41,000	37,800	2,337	2,740	(*)	45
Seminole	6,900	7,300	77,800	101,900	1,912	3,212	(*)	....
Rest of State	10,600	10,800	113,600	102,600	3,455	4,111	(*)	107
Kansas	2,700	2,300	24,400	22,600	1,406	1,768	10,416	....
Texas	43,500	43,000	420,100	331,600	17,131	18,197	41,412	776
East Texas	4,900	5,000	32,000	18,100	398	625	(*)	776
North Texas	1,800	1,700	18,700	23,300	660	554	(*)	....
Panhandle	25,500	24,600	231,100	164,900	13,528	13,514	(*)	....
West Central	6,700	6,700	77,400	70,900	1,494	2,000	(*)	....
Rest of State	4,600	5,000	50,900	54,400	1,051	1,504	(*)	....
Louisiana	3,900	3,700	37,500	33,500	807	1,203	1,176	....
Arkansas	1,000	1,100	11,800	14,000	187	223	1,302	375
Rocky Mountain	5,100	5,500	53,300	50,300	1,247	1,314	3,234	18
California	41,300	43,800	455,900	453,600	2,866	3,131	42,638	(*)
Huntington Beach	3,200	3,400	35,700	32,400	(*)	(*)	(*)	(*)
Kettleman Hills	13,300	15,200	139,100	119,900	(*)	(*)	(*)	(*)
Long Beach	6,000	6,200	69,300	82,000	(*)	(*)	(*)	(*)
Santa Fe Springs	4,700	4,800	56,300	74,800	(*)	(*)	(*)	(*)
Ventura Avenue	3,900	3,600	39,700	40,900	(*)	(*)	(*)	(*)
Rest of State	10,200	10,600	115,800	113,600	(*)	(*)	(*)	(*)
Total	134,900	136,000	1,385,200	1,293,100	37,352	45,483	146,034	1,412
Daily average	4,500	4,390	4,150	3,870	.....	.....	4,868	47
Total (thousands of barrels)	3,212	3,238	32,981	30,789	889	1,083	3,477	34
Daily average	107	104	99	92	.....	.....	116	1

*Not available.

PRODUCTION AND DISTRIBUUTION OF NATURAL GASOLINE
(Thousands of barrels of 42 gallons)

	Nov., 1934 Total	Nov., 1934 Dy.av.	Oct., 1934 Total	Oct., 1934 Dy.av.	Jan.-Nov., 1934	Jan.-Nov., 1933
Production	3,212	107	3,238	104	32,981	30,789
Decrease in stocks	462	15	435	14	.....	74
Total	3,674	122	3,673	118	32,981	30,863
Blended at refineries	3,399	113	3,033	98	24,250	21,933
Run through pipe lines in California	73	2	95	3	1,153	1,161
Jobbers, exports, etc.	130	4	380	12	4,411	4,561
Increase in all stocks	.....	....	.....	....	34	.....
Losses	72	3	165	5	3,133	3,158
Total	3,674	122	3,673	118	32,981	30,863

PRODUCTION OF MOTOR FUEL
(Thousands of barrels of 42 gallons)

	Nov., 1934 Total	Nov., 1934 Dy.av.	Oct., 1934 Total	Oct., 1934 Dy.av.	Jan.-Nov., 1934	Jan.-Nov., 1933
Refinery gasoline:						
Straightrun	16,453	549	17,032	549	189,605	180,532
Cracked	15,592	520	16,014	517	166,173	166,345
Natural gasoline:						
Production	3,212	107	3,238	104	32,981	30,789
Deduct losses	72	3	165	5	3,133	3,158
Benzol	114	4	112	4	1,477	1,248
Total motor fuel	35,299	1,177	36,231	1,169	387,103	375,756

Natural Gasoline Shipments Lag in the Pacific Territory

Natural gasoline production in the Pacific Coast territory during November was 33,000 bbls. daily, a decrease of 1,000 bbls. daily under the previous month. Refinery utilization was 35,000 bbls. daily, a decrease of 2,000 bbls. daily. Shipments were negligible, a total of 2,000 bbls. having been shipped during the month.

NATURAL GASOLINE PLANT OPERATIONS
November, 1934

Field—	Gas treated (thou. cu. ft.)	Natural gasoline produced (gallons)
San Joaquin Valley:		
Elk Hills	65,443	119,054
Kettleman Hills	10,362,101	13,781,157
Midway-Sunset	1,182,676	2,275,592
Mountain View	213,642	218,892
Miscellaneous	436,683	527,944
Coastal Region:		
Elwood	222,053	399,208
Rincon	67,329	76,795
Santa Maria	155,629	396,850
Ventura Avenue	3,584,806	3,875,239
Miscellaneous	243,066	246,747
Los Angeles Basin:		
Coyote	547,847	947,752
Domingues	725,505	1,472,019
Huntington Beach	2,142,770	3,224,723
Inglewood	113,232	165,259
Long Beach	1,850,076	6,008,473
Playa del Rey	192,980	596,642
Richfield	665,746	598,054
Rosecrans	517,997	664,083
Santa Fe Springs	2,756,010	4,670,194
Seal Beach	286,945	530,451
Torrance	103,482	226,305
Miscellaneous	324,368	776,565
Total all fields	27,360,391	41,297,998

DISTRIBUTION
(Gallons)

	Natural gasoline inc. liquefied pet. gas Nov.	Oct.
Stocks beginning of mo.	3,131,436	
Production during mo.	41,297,998	
Delivered to refineries		40,154,201
Delivered to jobbers, brokers or blenders		1,362,324
Blended at plants for production of motor fuel		27,970
Losses		19,022
Stocks end of month		2,865,917
Total	44,429,434	44,429,434

Liquefied gas production:
820,762 gals. = 19,542 bbls.
Motor fuel produced: 6,292 gals. = 150 bbls.

SUPPLY

Total production	33,427	34,298
Stock transfer (deliveries) receipts—net	(469)	(405)
Receipts and imports		
Current crude prod. trans. to "G" or "H"		
Net total	32,958	33,893
Deduct refinery requirements:		
Run to stills	2,445	3,070
Blended	32,197	34,048
Total	34,642	37,118
Add refinery output:		
Straightrun		
Natural gasoline—net	161	169
Cracked		
Less: Used for cracking:		
Net refined production	161	169
Net current supply	(1,523)	(3,056)

DEMAND

Domestic demand including bunkers	875	908
Shipments to Alaska and Hawaii	7	4
Rail and truck shipments to U. S. points outside Pacific Coast territory	5	6
Demand in domestic market area	887	918
Shipments: Pacific foreign inc. Canal Zone	64	2,306
Shipments: Atlantic foreign		
Shipments: Intercoastal		
Total market demand	951	3,224
Losses (gains) unaccounted for—net	1,662	907
Total current demand	2,613	4,131
Surplus or (deficit)	(4,136)	(7,187)

NEWS FOR PETROLEUM REFINERS

Three Subsidiary Companies Take Socony-Vacuum Name

NEW YORK, Jan. 14.—A further step in the consolidation of the operations of the Socony-Vacuum Oil Co., Inc., was taken over the past week in the announcement that three refining and marketing subsidiaries, the White Star Refining Co. of Detroit, Lubrite Refining Corp., St. Louis, and the White Eagle Oil Co., a Kansas organization, would in the future operate under the name of the parent company. Each will retain its former identity in that each will be a division headquarters to be known as White Eagle, White Star and Lubrite divisions.

Plans for the consolidation of the operations of these important marketing units have been under way since 1929 and 1930 when they were acquired by Socony-Vacuum. The products of the companies have taken the trade names of the parent company and they also sell the complete line of mobile lubricating oils. The White Star division with a refinery at Detroit is headquarters for distribution in that territory including 1,700 retail outlets in Michigan, Ohio, Indiana and Ontario, Canada. The Lubrite division with a refinery in East St. Louis serves Illinois, Indiana, Iowa, Missouri and Ohio with more than 1,300 dealers and distributors. The White Eagle organization is one of the large distributors in Kansas, Nebraska, Oklahoma, Colorado, Missouri, Iowa, North and South Dakota, Minnesota and Wisconsin. White Eagle has refineries at Augusta, Kans., and Casper, Wyo.

The consolidation of these operations with those of the parent company follows similar action last year in the case of the Standard Oil Co. of New York and the Vacuum Oil Co., Inc. These companies continued as subsidiary operating units after the Socony-Vacuum was organized as a holding unit through a merger of the original Standard of New York and Vacuum oil companies. Last year the Socony-Vacuum became an operating unit and all the operations of the New York Standard and Vacuum were absorbed. At present the marketing facilities of the old Standard of New York and New England are operated as a Standard of New York division of the parent company. It is said that in time this old Standard of New York identification will be entirely dropped.

This development has caused considerable discussion in local marketing circles. There is speculation as to whether this will mean that with the passing of the Standard of New York the Standard of New Jersey will operate in New York and New England. At present the Standard of Jersey marketing operations in that territory are carried on by the Colonial Beacon Oil Co., a subsidiary.

In its program of nationalizing its marketing operations Socony-Vacuum has uniform trade marks for practically all of the products sold by subsidiary companies. There are now only three important domestic subsidiaries which do not have the name of the parent company. These are the Magnolia Petroleum Co. in the Mid-Continent, General Petroleum Corp. on the west coast and Bartles-Maguire Oil Co. with headquarters in Milwaukee and Chicago.

DELAHUNT TO NEW POST

A. P. Delahunt, commissioner of the liquid fuels tax in Pennsylvania for four years, has been appointed a special representative of the A.P.I. committee, with headquarters in New York.

Number of Refinery Chemists Employed Has Trebled During Ten Year Period

In the many operations which constitute the refining of petroleum, the place of the chemist or chemical engineer has been definitely established. As a man with a technical background, he is qualified to act as the connecting link between the theory of established chemical and physical laws, and the practical applications of them as required in the plant or laboratory.

The past few years have witnessed a decided change in the viewpoint given the various processes in the manufacture of gasoline, lubricating oils, etc. From a simple distillation process of separation of crude oil into its various components, the refining business has evolved into an industry employing a wide variety of chemical operations. Many of the refining steps formerly depended upon human manipulation and skill gained through pratcice. The stillman developed his technique in producing a desired cut by methods requiring years of practice of the trial and error type. In the wax plant the much coveted technique of a good operator produced large crystals to form in the oil, facilitating easy pressing to give a low cold test oil. A great deal of mystery was connected to the manufacture of asphalt, and the man who could obtain consistent results in blowing and cutting was not common. Such qualities as penetration of asphalt, color and cold tests of lub cuts, and endpoints of gasoline were therefore dependent upon the human element. Not enough credit can be given these trained men, however, for they produced excellent results for the conditions under which they worked. Their technique, however, has rightfully given away to mechanical refinement of equipment and to chemical control of operations.

Hand in hand with this development went the chemical refinement of products petroleum. In early refining, about the only chemicals needed were sulphuric acid and sodium hydroxide. The large scale consumption of chemicals started slowly at first, but once on its way grew rapidly to the present tremendous proportions. The expenditure for chemicals to be used in refineries in 1935 will exceed $100,000,000. With the aid of these chemicals the industry has been able to expand to include the finishing of the products which before had been merely separated into the raw fractions supplied in the form of crude petroleum.

With the introduction of cracking, a host of new chemicals soon found their way into use. The unsaturated character of cracked gasoline sent chemists on an exhaustive search for inhibitors. Catylists were studied and tested to determine their use in aiding the process, and the chemistry of cracking became the principle object of study.

With the inception of high-compression motors, there appeared the demand for higher octane gasolines. Chemists studied thousands of compounds searching for the most suitable anti-detonators to add to the otherwise finished gasoline. This development in turn led to the custom of dyeing branded gasoline to distinguish them and the chemist was again sent on the trail of suitable dyes to both color the fuel and decrease its gum forming characteristics.

Motor Lubricants

Lubricating properties of oils were also found inadequate for many of the extreme pressures imposed on them by modern machinery. It became the chemist's job to develop the extreme pressure lubricants by blending petroleum cuts with sulphur, oleates and various metallic soaps. Color in lub oils was further improved by treatment with natural clays, which were then discovered to possess added bleaching power when activated with acid, washed and dried. In the manufacture of these improved lub stocks, the chemical engineer had an important part. He helped develop ammonia chilling systems of both the direct expansion and the brine types. Solvent dewaxing and the use of filter aids were later contributions in this connection.

The adoption of solvent extraction opened the refining industry to a still larger group of chemicals. In their effort to improve the viscosity index and to cut down the carbon residue of lub oils, chemists ran tests on a large number of solvents. About a dozen solvents have been accepted into plant operations, with research for more continuing.

Throughout this development the chemical engineer has cooperated with the refiner in numerous smaller capacities. He has adjusted furnace conditions to give maximum combustion, perfected insulation, reclaimed chemicals and aided in many other ways to bring about economy in the plant.

Thus from the restricted use of such chemicals as sulphuric acid, caustic soda and litharge, the industry has expanded to consume large quantities of lime, fullers earth, sulphur, ammonia, charcoal, hypochlorites, sodium chloride, calcium chloride, chlorine, sulphur dioxide, tetraethyl lead, monobenzol-para-aminophenol, wood tar derivatives, oleic acid derivatives, dichloro-ethyl ether, propane, cresylic acid, furfural, phenol, nitrobenzene, aniline oil, acetone, benzol, trichloroethylene and many other chemicals.

The value of the chemically trained

(Continued on Page 31)

TEXAS CRUDE ANALYSIS

Analyses of samples of crude oil from several Texas oil fields have been issued from time to time by the U. S. Bureau of Mines. As many of the oils were never reported, and some of the reports issued are now out of press, the Bureau of Mines has assembled into one report, analyses of all Texas crudes which the bureau has investigated. This pamphlet named "Tabulated Analyses of Texas Crude Oils," R.I. 3,252, is available by writing the U. S. Bureau of Mines, Washington, D. C.

REGINA REFINERY CLOSED

REGINA, Saskatchewan, Jan. 12.—The plant of Imperial Oil Refineries, Ltd., in operation here since 1916, is being closed this week, about 240 employes being affected. Closing of the plant was the result of the recent unfavorable increase in freight rates on imported crude. The shipping and sales departments will continue to operate to liquidate the stocks now at the plant.

AVIATION ACTIVITIES

Eight members of the Socony-Vacuum Oil Company's aviation division left Newark airport this week in three of the company's planes for a coast-to-coast tour of America. They will introduce the 1935 line of Socony-Vacuum's new aviation products, and also make a business survey of the country.

Proposed Bill Requires Alcohol Blend Gasoline

A measure has been introduced in the House of Representatives at Washington by John T. Buckbee of Illinois, providing for an increase in the use of alcohol in motor fuels. The measure calls for a tax of 10 cents per gallon on all gasoline sold with an alcohol content below a prescribed amount. This blend must contain 2 per cent alcohol by volume effective 60 days after enactment of the measure, the required content increasing 1 per cent every six months until 10 per cent is reached.

The bill further states that alcohol manufactured from domestic agricultural products may be withdrawn from bond without payment of the internal revenue tax, and that alcohol used in motor fuels need not be denatured.

GASOLINE ALLOWABLE

The national gasoline allowable for February was placed at 32,560,000 bbls. today by Oil Administrator Harold L. Ickes, authorizing a decrease for the month as a whole from the 34,750,000 gallons in January, but an increase of 42,000 bbls. in the daily production, since February has only 28 days, as compared with January's 31.

The daily average for February will be 1,163,000 bbls., against 1,121,000 in January.

In recommendng the allocation, the Bureau of Mines and the Petroleum Administrative Board advised Administrator Ickes that gasoline production in February to meet demand should be 27,960,000 bbls., with a provision for 4,600,000 bbls. to be added to inventories so that working stocks would meet trade requirements.

GEORGE L. PRICHARD DIES

PITTSBURGH, Pa., Jan. 10.—George L. Prichard, 55, general manager of refineries for the Gulf Refining Co., was stricken as he backed his car out of his garage this morning. He went into his house and called a doctor but died five minutes after the physician arrived.

Burial was held in Philadelphia, his native city. He leaves his widow, two sons and two daughters.

ADD BOILER CAPACITY

The Crown Central Petroleum Corp. of Houston, Tex., has let a contract for a large steam generator which will be tied into their present boiler house.

The new unit is being furnished by the Henry Vogt Co., and is of the bent tube water tube design with fusion welded drums, and designed for a maximum capacity of 75,000 pounds of steam per hour. The normal rating of the boiler is 750 boiler horse power.

OIL REGENERATION URGED

As a move to decrease oil imports, Germany has organized a drive to foster the regeneration of used lubricating oils. Efforts are directed to increasing the market for these oils and research is being carried on to improve methods now used in the process.

The dependence of Germany on outside sources for a greater percentage of its petroleum products is the reason for the drive to limit oil imports.

CITIES MAY GET TAX

TOPEKA, Kans., Jan. 15.—A bill to allocate to Kansas cities 12½ per cent of the 3-cent a gallon gasoline taxes collected in the State was introduced in the House today by Representative F. H. Cron, of Butler.

NEWS FROM FOREIGN LANDS

VENEZUELA

Venezuela in 1934 produced 136,610,802 bbls. of crude oil, the largest yearly total in its history, according to preliminary figures. Except for January of last year, 1934 showed a consistent month to month increase over the corresponding month in 1933. The following table gives the production by months for the two years (data for 1933 compiled from O'Shaughnessy Oil Bulletin; data in barrels):

	1934	1933
January	9,698,964	10,859,700
February	9,769,000	8,833,773
March	10,900,000	9,944,519
April	11,027,600	9,065,356
May	11,542,000	9,133,045
June	11,203,000	9,262,274
July	11,976,200	10,052,418
August	12,232,000	10,209,267
September	12,075,600	10,181,844
October	13,340,300	10,728,228
November	11,734,018	10,716,502
December	12,111,120	11,084,419
Total	136,610,802	120,164,450

Based on averages, the production in 1934 was 374,300 bbls. daily, which compares with 329,210 bbls. daily in 1933. Preliminary figures show that this increased production was brought about by the drilling of 225 wells, an increase over the 1933 total and one of the most active years from the standpoint of drilling in the history of Venezuela.

As usual the Lake fields account for a large part of the drilling with Quirequire, in eastern Venezuela, the most important outside field. Several pools were extended during the year but no important wildcat completions were reported.

The following table summarizes the production data by companies and fields for December, 1934 and 1933, and indicates the changes that have taken place over the past year (data in barrels):

PRODUCTION BY COMPANIES

	December 1934	December 1933
Lago Pet. Corp.	4,213,729	3,526,465
Venezuelan Oil Concessions, Ltd.	3,024,539	2,845,459
Creole Pet. Corp.	1,866,252	1,398,132
Caribbean Pet. Co.	1,351,500	1,170,033
Venezuelan Gulf Oil Co.	1,256,000	1,410,000
Colon Oil Corp.	415,400	629,734
British Controlled Oilfields, Ltd.	83,700	104,596
Total	12,111,120	11,084,419

PRODUCTION BY FIELDS

	December 1934	December 1933
Lagunillas	6,991,191	5,769,051
La Rosa-Ambrosio	1,642,843	2,045,606
Mene Grande	1,251,500	1,170,033
Quirequire	1,391,447	766,486
Tarra	415,400	629,734
Cumarebo	286,735	395,646
Concepcion	129,952	182,559
El Mene	83,700	104,596
La Paz	18,352	20,708
Total	12,111,120	11,084,419

These tables show that the two Standard of New Jersey companies (Lago and Creole) had substantial increases in production during 1934 so that their production at this time exceeds the Shell group of companies (V.O.C., Caribbean and Colon). The increase in the production of the Creole Petroleum Corp. through its subsidiary, the Standard Oil Co. of Venezuela, was especially noteworthy. All of this increase is accounted for by the company's increased production in Quirequire Field of eastern Venezuela. The production of the Colon Oil Corp. in the Tarra Field decreased substantially over the past year.

Among the fields, the production of Lagunillas, Mene Grande and Quirequire in December were running ahead of December, 1933, with declines in all the other fields. In addition to Tarra, the reductions in the smaller fields of Cumarebo, Concepcion, El Mene and La Paz has been large.

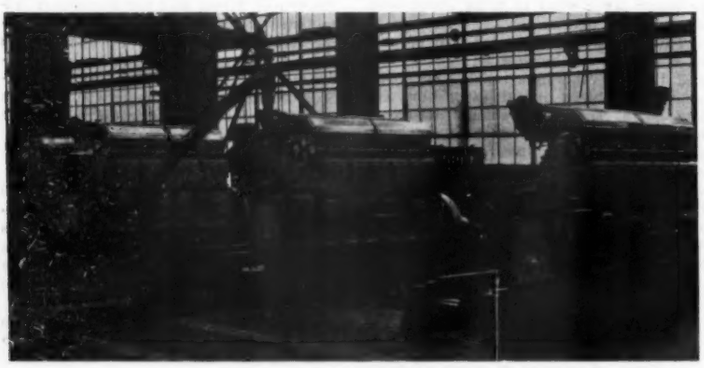
IRAQ

The ceremonies in connection with the formal celebration of the operation of the pipe line of the Iraq Petroleum Co., Ltd., started Monday at Kirkuk, Iraq, and will continue at other points until January 24. The first leg of the Iraq pipe line was completed last summer when deliveries were started at the Tripoli terminal in Syria, followed in October with deliveries at the Haifa, Palestine, terminal. Both legs of the terminal are now reported to be operating approximately 50 per cent the capacity of 85,000 bbls. daily. Plans announced some time ago called for the operation of the Tripoli terminal on a capacity basis of 42,500 bbls. daily during January. It is expected that with the completion of additional pumping stations the Hafia terminal will also be ready to operate on a capacity basis by late spring.

The official ceremonies in Iraq started at K 1 pump station located at Kirkuk where the crude oil from the Kirkuk Field is started through approximately 1,200 miles of pipe line to the two Mediterranean terminals. The ceremonies were in charge of His Highness King Ghasi, followed by luncheon. A conducted trip will then be made to Tripoli via Baghdad, Damascus and Beirut.

The Tripoli ceremony will be held Saturday, January 19, and will be in charge of representatives of the French government. It will be held at the Tripoli depot. January 20 and 21 will be spent at Beirut en route to Haifa.

The Haifa ceremony in charge of the British high commissioner will be held at noon, January 22, followed by lunch. On January 24 the celebration will be concluded with a ceremonial luncheon at Amman, Transjordania, which will be attended by the amir of Transjordania.



Diesel electric drilling unit for power barge to be used in Venezuela.

GERMANY

By CARL H. EHLERS

Germany's trade balance is principally burdened by her imports of textile materials and oil products. For instance, in 1930, she imported oil products of various description in an amount exceeding $100,000,000. The United States' share in these imports amounted to between 40 and 50 per cent of the total. During the past three years these imports have been reduced by more than half. As a natural consequence of Germany's low gold reserve and foreign exchange holdings, she is trying to replace foreign imports through domestic production or through barter arrangements. While it is true that her oil production is steadily increasing, her oil consumption likewise shows an accelerated upward tendency. Germany is motorizing fast. Automobile production has increased approximately 25 per cent during the current year. She has lowered or abolished taxes on automobiles and has started an automobile express highway building program on an extensive scale. Her crude oil production for the current year, based on the figures of the past nine months, is estimated to reach a total of approximately 2,300,000 bbls. for the full year, against 1,700,000 bbls. for 1933, 445,000 bbls. 10 years ago in 1924, or 260,000 bbls. in 1930.

This is undoubtedly a favorable development. Nevertheless, the fact remains that the perplexing question whether Germany will become an oil-producing country of importance can be answered today neither in the affirmative nor in the negative. In spite of encouraging results, especially attained in the current year, the situation, reviewed as a whole, must remain a problem.

Students who have investigated the German oil-promising regions are as undecided as ever with respect to their potentialities, and many German geologists and geophysicists themselves belong in the class of the "doubting Thomases." In 1930, Germany experienced what we might term a mild oil boom. A similar situation obtains also at present. When the writer discussed this "boom" situation in 1930 with German bankers connected with the German oil industry, they retorted with expressions as follows: "Ach Unsinn, bei uns gibt es kein Oel." German newspapers published articles entitled: "Amerikanische Rockefellers wachsen nicht in Deutschland," or "Amerikanischer Erdoelzauber." In other words, Germany refused to become "oil minded."

English and American geologists, such as A. Beeby Thompson & Partners, London, Fred H. Kay, Alfred J. Diescher, Dr. A. C. Veatch, who during the years of 1928 to 1930 undertook the investigation of subsurface conditions of large oil-promising regions, drew the attention of German financial circles and prominent industrial concerns to the possibility of discovering prolific oil-bearing horizons in the vicinity of a great number of known salt domes in which the northwestern German plain is rich. The geologists laid stress on the fact that Germany had developed a potash industry of world-wide importance, simultaneously expressing astonishment that no effort had ever been made to systematically exploit these salt dome regions for oil, in spite of Germany's world-wide fame for scientific and progressive industrial developments. The excuse was advanced that lack of private capital was in the main responsible for this state of mind. This "non-oil-mindedness," which, in contrast to the decade before the great war, when huge sums of private capital were available for the development of the potash industry, prevailed during the years after the war, has apparently undergone a decided change of late, if signs don't fail us. It must, however, be said that private initiative for the development of oil-promising regions, so far, has made itself felt only to a limited extent.

Present activities indicate that the government has definitely gone into the oil business because it began also to realize that control of oil is tantamount to the possession of power. Clemenceau's cable to Washington in 1918, in which he said "a drop of oil means to us a drop of blood," will probably be remembered by contemporary Germany. The Germans will undoubtedly also remember not only Lord Curzon's statement that "the Allies flowed to victory on a sea of oil" but also the English government's machinations to obtain control of the Persian fields through the Anglo-Persian Oil Co.

The German government has installed two separate actions in its efforts of self-sufficiency:

1. It has placed at the disposal of the Reichswirtschafts-Ministerium (Reich Economic Council) and the Prussian Geological Survey the amount of RM5,000,000. At the discretion of these governmental institutions credits are extended to German oil companies to facilitate drilling operations solely in wildcat regions. The government has furthermore placed at the disposal of the above mentioned institutions a sum of several hundred thousand marks for the purpose of investigating oil promising regions by virtue of geophysical methods. A great number of unemployed geologists and geophysicists thus have found employment.

2. The German government has recently instituted the organization of a corporation called the Brown Coal Benzine Co. with a capitalization of RM100,000,000 for the purpose of manufacturing synthetic oil products out of lignite on the basis of the improved invention by Doctor Bergius. The capital of this company is to be furnished by large industrial concerns such as the Brown Coal Works, the German Dye Trust and the Steel Trust.

Whether Germany's inventive genius with respect to the undertaking proves to be successful remains to be seen. It is an old axiom that the natural product coming from the subsurface reservoirs is almost invariably cheaper than the product derived through synthetic methods and scientific processes.

We shall have to await the outcome of the government's program for home production before a definite conclusion with respect to the German oil problem can be drawn. Perhaps the doubting Thomases are making a mistake in their negative assumption.

RUMANIA

Crude oil production in Rumania totaled 750,000 tons in November or approximately 175,000 bbls. daily. This is an increase of approximately 165,000 bbls. daily. Following is the output of the principal producing companies for the month:

Astra Romana	150,346
Steaua Romana	96,615
Concordia	96,632
Phoenix	78,594
Romana-Americana	71,779
Prahova	47,666
Creditul Minier	58,225
Colombia	34,540

East Texas Field Is Under Strict Control

(Continued from Page 9)

good $3,000,000 worth of roads for its $3,000,000.

Want a Valid 9(c)

There is a strong sentiment throughout the East Texas field for Congress to enact into permanent law a valid provision for controlling interstate shipments of hot oil and gasoline. When asked why this would be necessary in view of the general opinion the state laws cover the subject it was said such a law would safeguard the interests of all states and would be especially beneficial for states which do not have any regulatory bodies of their own.

Senate Bill 21, which became effective December 25, and under which the State Tender Board is operating now has the following provision:

"Section 1. That Section 14 of Chapter 26, Acts of the First Called Session of the Forty-second Legislature, be and the same is hereby amended so that it shall be hereafter read as follows:

" 'The purchase, transportation, selling or handling of crude petroleum oil or natural gas produced from any property in violation of any statute or any rule, regulation or order of the Railroad Commission of Texas is hereby prohibited.

" 'The purchase, transportation, selling or handling of refined crude oil, crude tops, topped crude, processed crude petroleum, residue from crude petroleum, cracking stock, uncracked fuel oil, treated crude oil, fuel oil, residum, gas oil, casinghead gas, casinghead gasoline, naptha, distillate, gasoline, kerosene, benzine, wash oil, waste oil, blended gasoline, lubricating oil, blends or mixtures of petroleum, and/or any and all products or by-products derived from crude petroleum oil or natural gas, whether hereinabove enumerated or not, produced in violation of any statute or any rule, regulation or order of the Railroad Commission of Texas is hereby prohibited'."

ONTARIO GASOLINE PRICES

TORONTO, Ontario, Jan. 12.—Effective January 3, retail prices of gasoline in Toronto, Hamilton and adjacent territory advanced 1½ cents per imperial gallon; bringing the price of standard advertised brands, less tax, to 19 cents. Prices in all other Ontario districts remain unchanged.

Under the price schedule effective January 3 the dealers will again have a 4-cent margin.

In Montreal and district the 1 cent per gallon cash discount offered by many gasoline retailers has been discontinued, effective January 3. Prices elsewhere in Quebec province remain unchanged.

CANADIAN WESTERN GAS PEAK

CALGARY, Alberta, Jan. 12.—In the recent severely cold weather of late December, deliveries of gas by the Canadian Western Natural Gas, Light, Heat & Power Co. of Calgary to its consumers in Calgary, Lethbridge and other communities of Southern Alberta on December 25 reached a peak of 51,000,000 feet in 24 hours. The normal summer consumption is 10,000,000 feet. Three pipe lines from the Turner Valley Field deliver gas to the 16-inch main transmission line, their maximum capacity being approximately 80,000,000 feet a day.

MARKETERS CONVENTION

Oklahoma oil jobbers will meet for the annual convention of the Oklahoma Petroleum Marketers Association, on January 18 and 19, in the Skirvin Hotel in Oklahoma City. Early registration is urged.

CHARLES J. COFFIN DEAD

Charles J. Coffin, oil producer of Chicora, Pa., died on January 5. He was a son of the late S. G. Coffin, of Bradford, Pa., pioneer oil producer in the Pennsylvania and Illinois fields.

Freedom Starts Construction on Dubbs Cracking Unit and Chlorex Plant

By ROBERT C. CONINE

FREEDOM, Pa., Jan. 14.—Climaxing a series of major plant improvements which has addded modern Badger fractionating units, new wax presses, supercentrifuges, and other up to date equipment, Freedom Oil Works Co. this week begins construction on a 500-bbl. Dubbs cracking unit, and a Chlorex solvent extraction installation capable of treating 500 bbls. of bright stock daily, or 1,200 bbls. of neutrals.

When these latest additions are on stream the Freedom company will have no difficulty in producing gasoline of 70 to 74 octane rating, and lubricating oils of considerably higher viscosity index and resistance to oxidation and sludging than Pennsylvania Grade crankcase materials not solvent treated. The fact that this company, which has operated since 1879 and can name many customers of more than 30 years standing, makes the decision to go to solvent extracted lubricating oils is particularly significant, and indicative of the fast growing favor with which solvent treated Pennsylvania Grade lubricating oils are being received.

TEST DATA ON CHLOREX EXTRACTION OF 600 STEAM REFINED PENNSYLVANIA CYLINDER STOCK

Inspections—	Original wax bearing stock	Wax B. raffinate	Orig. dewax	Raff. dewax	Orig. finished	Raff. finished	Extract
Vol. % Yield	100	91.3	...	...	...	...	8.7
API gravity	27.0	28.5	26.0	27.5	27.2	28.4	14.1
Color, true	1490	1320	1610	1130	75	61	...
Color, N.P.A.	...	...	...	...	5	4½+	...
Pour °F.	+35	+60	+15	+5	+10	0	...
Acidity (Mg.KOH/g)	0.20	.062	.05	.025	.05	.05	...
Carbon residue	2.34	1.10	2.72	1.30	0.80	0.60	...
Flash	590	580	580	570	580	570	...
Herschel Demus	...	...	...	..	1400	1560	...
*Vis. at 210° F.	152.4	143.9	169.3	156.1	151.7	145.2	602
*Vis. at 130°F.	862	735	...	...	...	...	...
*Vis. at 100°F.	2222	1775	2747	2240	2254	1902	..
Viscosity index	104	112	101	106	103	109	5†
V.-G. constant	.804	.794	.809	.800	.803	.795	.889

*Kinematic viscosity converted to Saybolt seconds. †Approximate.

Dubbs Installation

The Dubbs cracking and reforming unit at Freedom will be the last word in the full flashing type, equipped with bubble tower and side cut stripper. The unit will produce finished gasoline requiring only the addition of Universal inhibitor to prevent gum formation and color depreciation, although in some operations a light caustic wash or plumbite treat may be used. The furnace will be of unique design permitting the application of higher temperatures without coking. This heater is said to produce much higher temperatures than furnaces hitherfore designed.

Chlorex Unit

The Chlorex solvent extraction installation at the Freedom refinery will be similar in many respects to that recently completed at the Pennzoil Co. plant in Oil City. For greater efficiency and economy in recovery of the solvent dichlroethyl-ether, a pipe heater and vaporizing tower will be required. The solvent to lub stock contacting will be of the continuous countercurrent type in which the fresh charge of bright stock or neutral first contacts three times used solvent in the first stage, then twice contacted solvent in the second stage, and finally fresh solvent in the third stage. The improved portion of the oil, more than 90 per cent of the charge, is then charged to the heater for removal of the residual Chlorex, as raffinate. The extract, which contains nearly all of the solvent in solution, is similarly treated for recovery of the Chlorex. The oil recovered from the extract is the inferior fraction taken from the original lub charge to the unit and may be run to the cracking plant as charging stock.

An indication of the improvements which may be expected is given below:

Percolation yields of unextracted dewaxed stock are compared with percolation yields of extracted dewaxed 600 steam refined Pennsylvania cylinder stock:

INDICATED RESULTS

	Color viscous oil	Percolation yields in gals./ton
Unextracted stock	4½	193
Unextracted stock	5	238
Unextracted stock	6	305
Extracted stock	4½	295
Extracted stock	5	360
Extracted stock	6	447

The clay used was No. 1 Attapulgus, and the dilution ratio of oil to water white kerosene, 1 to 2.

The method of extraction in the above test materials was by 4 stage batch countercurrent. Temperature of extraction was 75° F. Ratio of Chlorex to oil was 1.988 to 1. Volume per cent of Chlorex in raffinate layer was 22.7.

It is to be noted that with a comparatively slight loss, 8.7 per cent, of material which is suitable only as charging stock to the crackers, a striking reduction was made in the carbon content (Conradson), while the viscosity index of this heavy fraction was raised to 112 in the wax bearing raffinate and to 109 in the 0° F. pourpoint material. As the lighter cuts are improved considerably more, it is indicated that the finished motor oils in a commercial installation such as that at Freedom will permit easy starting in sub-zero weather, and protect the engine at highest operating temperatures.

Gasoline Consumption 99.5 Per Cent of Peak

(Continued from Page 12)

October, 1934, and November, 1933. To supply this demand it was necessary to draw on storage for a total of 5,250,000 bbls. This is approximately one-third of the withdrawal for the entire 11 months. On the supply side, the domestic production for the first 11 months was practically the same as in 1933 with a small increase in imports. Total exports of crude oil and refinery products for the periods under comparison were about two and a half times the imports. The government figures indicate that the total demand for all oils was 5.7 per cent greater than in 1933.

E. H. PANNS DIES

LOS ANGELES, Calif., Jan. 12.—Edwin H. Panns, refinery superintendent of the Bellview Oil Co.'s refinery at Santa Fe Springs, Calif., succumbed to burns received several days ago in an explosion at the plant.

Recent Wildcat Tests Confined to Few States

(Continued from Page 13)

1934, but the number of wildcat wells are not reported up to this time.

Geology Advantageous

In the study of these wildcats it was noted that the depths drilled varied all the way from 100 to below 11,000 feet. The depths given in the accompanying table are the actual averages for each state arrived at by securing the total depth of all tests and dividing each state's total by the number of wells drilled.

Drilling costs cover contract price plus other expenses and are based upon wildcats and not upon completions which cost more. Again the figures must represent averages for there is a wide difference in the cost of drilling wildcat wells influenced by local conditions.

One fact was developed that is very significant. Of the 1,235 wildcats tabulated, 160 were drilled by the major companies and 1,175 by independents or promoters. Out of the 160 wildcat completions of the major companies, 43 resulted in the discovery of oil. This is 27 per cent of the 160 operations. The balance of the discoveries are credited to the other operators and total 61 strikes, or only .052 per cent of the holes drilled. These figures indicate the value of geology.

Number of Chemists Trebled in 10 Years

(Continued from Page 29)

man has been graphically shown in employment figures over the past. The following table compiled from statistics of the United States department of commerce traces the trend in refinery labor over a 10-year period beginning in 1923:

Year	Wage earners (aver. for the year)
1921	63,189
1923	66,717
1925	65,324
1927	71,234
1929	80,596
1931	68,824

In comparison to this, it is notable that in 1920, chemically trained employes in petroleum refineries numbered 8,891, while in 1930, the number was 25,274. Over the 10-year period a gain of more than 280 per cent was made in this field in the face of an overall gain of only 3 per cent in total wage earners.

At present the petroleum refiner is indicating that from a major consumer of chemicals, he may in the future become also a major producer of other chemicals. Gases from cracking stills show strong possibilities as sources for many important chemicals. Improved distillation, extraction and chemical processing may make possible the manufacture of a wide variety of alcohols and other solvents from petroleum cuts. Hydrogenation offers another medium for chemical manufacture. A better understanding of the polimerization in unsaturated gasolines and naphthas may bring petroleum refining into the synthetic resin industry. All of these developments will of necessity be made with the guidance and work of the chemist. His position in the refinery portends, then, to become even more prominent in the future.

SAMANS AND ELY APPOINTED

Walter Samans, chief engineer, Atlantic Refining Co., and A. J. Ely, engineering department, Standard Oil Development Co., have been appointed to the Boiler Code Comm. of the A.S.M.E. Both men are members of the American Petroleum Institute's sub-committee on Unfired Pressure Vessels and of the joint A.P.I.-A.S.M.E. committee on Unfired Pressure Vessels. Mr. Samans is chairman of both committees.

The joint committee recently completed a code for unfired pressure vessels now in wide use by the industry.

Late Fields

OKLAHOMA

The South Burbank Pool in Osage County, Oklahoma, has been cut off on the southwest by a dry hole just completed by A. H. Kasishke. His No. 3, NE SE NW Section 15-25-6, had Bartlesville sand at 2,850-90 feet with no oil and a little water. Chat was penetrated at 2,-960 to 2,970 feet with only a showing of oil but with considerable water. The hole was abandoned.

Phillips Petroleum Co. deepened an ancient Bartlesville sand well in NE cor. SW NE NE Section 7-24-10, Osage County, to Siliceous lime at 2,318-55 feet and finding nothing, abandoned the hole.

Sinclair Prairie Oil Co. completed a duster in SW SE NW Section 4-22-9, Osage County, at 1,838 feet.

In the Fitts Pool, Carter Oil Co.'s No. 2 Hardin, NW NE SW Section 30-2-7, had Bromide at 3,970 feet and Mc-Lish lime at 4,200 feet. It produced 1,-382 bbls. in three hours with gas at the rate of 8,000,000 feet per day.

Blackstock and others' No. 3 Craddock, NW NE SE Section 25-2-6, in the Fitts Pool, flowed 948 bbls. the first hour and 448 bbls. the following 30 minutes, with gas at the rate of 9,000,000 feet per day. Bromide was topped at 4,070 feet and McLish lime at 4,290 feet.

Magnolia Petroleum Co.'s No. 4 Tom Norris, SE SW NE Section 25-2-6, had Bromide at 4,220 feet, sand at 4,290 feet and was bottomed at 4,308 feet, in sand. It flowed 716 bbls. in one hour, and 230 bbls. in 17 more minutes through casing and then flowed 114 bbls. in 30 minutes through 3-inch tubing.

Seven in East Texas Are Cited in Contempt Cases

LONGVIEW, Tex., Jan. 14. — Seven companies and individuals have been cited for contempt of court for alleged violation of injunctions restraining them from transporting or handling petroleum products without state tenders.

Five of the contempt cases will be heard in the Court of Civil Appeals at Texarkana to which the defendants had appealed their cases from 124th District Court here. All proceedings were prepared by Merton L. Harris and Tom D. Howell of the local branch office of the attorney general's department.

Those cited in the Civil Court of Appeals for contempt are: George Culver, trading and doing business as the Consolidated Refinery; George L. Culver, trading and doing business as the Linzie Refinery; J. N. Whitlock, president of the Acme Refining Co.; R. J. McMurrey, of the McMurrey Brothers Refining Co.; Dick Duncan, president of the Tyreco Refining Co.

Those cited in 124th District Court here are: C. D. Archer and R. O. Leneve, trading and doing business as the Blue Diamond Refining Co., and W. H. McKain, president of the McKain Fuel Oil Co.

Penalty for contempt in 124th District Court is a maximum fine of $100 and three days in jail.

In the Civil Court of Appeals the penalty is a maximum fine of $1,000 and 20 days in jail.

BRAZORIA COUNTY PIPE LINE

The Pan American Pipe Line Co., a subsidiary of the Standard Oil Co. (Indiana), is constructing a pipe line from the newly discovered pool in Hastings area, northeastern Brazoria County, Texas, to the main line of this company that terminates at the plant of the Pan American Refining Co., Texas City, Tex. This line will be laid with 6-inch reclaimed pipe, welded, and the approximate length of this feeder will be 8 miles. The Stanolind Oil & Gas Co. has production in this new field.

ICKES FOR GAS TAX INCREASE

WASHINGTON, D. C., Jan. 15.—Administrator Ickes, as public works administrator, intimated today the federal gasoline tax might be increased 1 cent to help pay for grade crossing elimination.

National Resources Board Report Urges State Regulation of Oil Production

By HUGH D. MALLON
Washington Bureau, The Oil and Gas Journal

WASHINGTON, D. C., Jan. 14.—Formulation of interstate compacts and the use of the oil producing states of the police powers reserved to the states by the Constitution is urged by the National Resources Board in its report on minerals. The report will be used as the basis for legislative proposals which will be urged by the administration in the furtherance of plans for national stability in the minerals industries, and in the advancement of proposals for national planning.

"The great mineral producing states should have the deepest interest in preventing waste of the resources which are the basis of their leading industries," says the report, "otherwise they may find their natural endowment dissipated after it is too late for remedial action." In this connection the report points out that in Indiana the natural gas fields of that State were profligately wasted, and no steps taken by the State to conserve this resource until the supply was exhausted, but compares this waste as being insignificant compared to the waste of natural gas in the Texas Panhandle.

Commenting on the Panhandle wastage the report says: "A billion feet is being blown off daily, with no use made of it except stripping for natural gasoline. In this case the gasoline recovers barely 5 per cent of the total energy in the gas and the other 95 per cent is simply blown away." Prevention of this and similar wastes elsewhere is a complex problem in the opinion of the committee on mineral policy making this report.

Waste prevention requires the use of the police powers of the states and a modification of the present judicial interpretation of the common law which makes oil and gas subject to the "rule of capture," is the opinion of the committee. The law of capture, the report states, should be superseded by a statute establishing the principle of the equitable share in the common reservoir. "Difficult as is the problem facing the states, the stakes are worth the effort," the report states. "The yearly waste of gas in the Panhandle is now sufficient to supply all domestic consumers in the State of Texas for a period of 17 years." The report continues with the comment that the wastage in this one field is nearly enough to supply every household, every store, hotel and office in the United States now using natural gas for a period of 12 months.

Many of the states, however, are not greatly concerned, as the resource losses from production wastes center chiefly in the dozen states which dominate the output of coal, oil and gas, the report points out. "This fact suggests the possibility of joint action by two or more states immediately concerned, through the use of interstate compacts," and illustrates the potentialities of such co-operation with the six-state compact for development of the Colorado River.

"Every encouragement should be given similar collective action by the states to conserve their mineral resources," the report continues.

Market in Group 3 Recovers From Fright

(Continued from Page 22)

sequence of which they are not disposed to buy anything they don't have to—not even high volatility.

Also natural gas companies are experiencing their season of heaviest demand. Natural gasoline is a by-product with them, and the more natural gas they produce to meet winter demand the more natural gasoline they produce too. This output added to what the regular manufacturers are making increases supply without reference to demand.

Then too the shift from stabilized grades to the 26-70 has a distinct market influence. Last summer approximately 50 per cent of natural gasoline production was 18-pound or lower. The present output of those grades is less than 27 per cent of the total. The effect of this change is to lose the market for stabilized grades without a corresponding increase in the market for the 26-70. The higher the price commanded by refinery gasoline, the more active becomes the competition of stabilized naturals with it.

Furnace Oils Sag

Springlike weather in many parts of the North had a softening effect on the furnace oils, which lost an eighth throughout the list. Notwithstanding the drop in distillates, kerosene held its price. A bit of real winter, it was said, would cause the heating oils to snap back quickly.

Neutrals continued steady. Bright and steam-refined stocks showed no signs of weakness and it was predicted that with the customary spring business likely to start next month, the trend of the whole lubricant list would be upward. Wax was a little stronger, with no price change.

PROOF OF RESALE FORMS

Forms have been approved by the Bureau of Internal Revenue for use by retail dealers in the resale of gasoline and oil to government units. The forms, used for refund of sales taxes require the names of the parties to the transaction, producer's invoice, name of article, date of resale, quantity resold, and purpose for which used by purchaser. Signatures are required of two witnesses, and the parties to the sale.

PLANT DESIGN

The construction and operation of oil refineries is slowly but surely approaching a truly chemical engineering undertaking. For this reason, the book "Chemical Engineering Plant Design," by Frank C. Vilbrandt, Ph.D., professor of chemical engineering at Iowa State College, should prove of especial value in the hands of a man who is planning to build a new plant or make changes in existing plants.

It was written with the idea of suggesting a plan of attacking construction problems and the data presented represent the result of laboratory investigation and a summary of authentic literature.

The writing of specifications for materials and the study of preconstruction cost accounting are also considered in the analysis of the submitted design. The book is a part of the Chemical Engineering Series and is available from the McGraw Hill Book Co., Inc., at 330 West Forty-second Street, New York City, for $4. It contains 342 pages and is adequately illustrated with charts.

BOROUGH HEADS NEW PLANT

MUSKEGON, Mich., Jan. 12.—W. R. Borough, formerly employed by the Texas Co. in Oklahoma, Texas, Wyoming and Montana, and for a number of years operator of refineries for this company at Sunburst, Mont., and Amarillo, Tex., has been named superintendent of the new plant now being completed in St. Louis, Mich., by the McClanahan Refineries, Inc.

The new independent Michigan plant is expected to be ready for operation by the middle of January with a capacity of about 1,500 bbls. of crude oil daily.

East Texas Injunctions to Three-Judge Court

AUSTIN, Tex., Jan. 14.—Application of R. E. Smith and others attacking the Railroad Commission orders requiring approved tenders for the movement of oil or products therefrom on hand before the order went into effect, was denied by District Judge Robertson here today.

District Judge Wheeler set all pending injunctions against Railroad Commission legislation for trial Thursday before himself, District Judge Moore and probably Judge Robertson.

The Smith case was considered an important test case.

The Tyler Texas Oil & Refining Co., C. D. Archer, G. H. Burnham, R. E. Smith and others, Linzie Refining Co., J. M. Bradshaw and William H. McKain seek to restrain the Railroad Commission from interfering with movement of oil and oil products produced prior to the commission's order of December 5.

Last week District Judge W. F. Robertson granted temporary orders restraining the commission from interfering with shipment of oil on hand before the December 5 order, but later set the orders aside.

Statement of Bank Shows Improved Oil Conditions

The marked improvement in business conditions in Tulsa and in the petroleum industry generally is reflected in the annual report for 1934 of A. E. Bradshaw, president, made to the stockholders of the National Bank of Tulsa, an institution with a large clientele interested in the oil business. The report shows an increase of nearly one-third in the volume of deposits of its more than 16,000 commercial accounts and an increase of more than 20 per cent in the deposits of its correspondent banks.

During the year 2,296 new commercial loans aggregating $11,514,703.72 were made. During this same period commercial loans aggregating $10,165,810.49 have been repaid. Lines of credit aggregating $2,510,000 have been extended to borrowers, however, only $1,055,204.94 of this amount is being used at this time.

E. I. Hanlon, president of Henaghan & Hanlon, Inc., and extensively interested in other companies connected with the petroleum industry, is chairman of the board of directors of the bank.

CONTRACTORS MEETING

DALLAS, Tex., Jan. 14.—Members of the Texas-Louisiana-New Mexico Drilling Contractors Association met at the Baker Hotel, January 12 to discuss possible merging with the Oklahoma-Kansas organization, but due to the necessary expense involved, it was considered disadvantageous to combine the two groups at this time.

M. J. Delaney, Dallas, is president of the tri-state association and presided at the meeting at which all officers and directors were re-elected. Other officers are: E. A. Showers of Houston, first vice president, Gulf Coast district; A. F. Lanier, Shreveport, second vice president, Louisiana district; T. S. Schroeder of Dallas, third vice president, New Mexico; George Barham, fourth vice president, Arkansas; W. D. McBee of Dallas, secretary, and M. L. Middleton, Dallas, treasurer.

CANADIAN GAS LINE

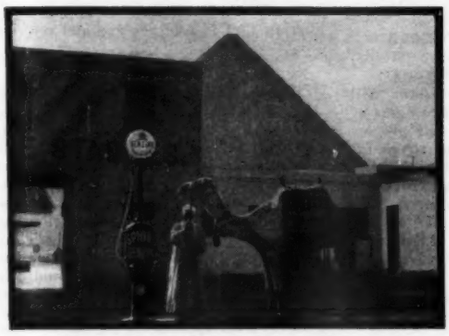
LEAMINGTON, Ontario, Jan. 12.—An agreement concluded by the Southern Ontario Gas Co. for the delivery of purified gas to the town of Leamington in Essex County, involves the construction of a new transmission line from the purification plant to the Glenwood Field to the town limits, a distance of approximately 20 miles. The town handles the local distribution through its own mains, and has heretofore been supplied with unpurified gas. Construction of the new line will probably commence early in the spring, with completion scheduled for early summer.

Gilbert and Barker

Subsidiary: STANDARD OIL COMPANY (NEW JERSEY)

• • •

Manufacturers of Oil Burners—Oil Furnaces—Gasoline Pumps—Oil Dispensing Pumps—Storage Tanks for Petroleum Products—Air Conditioning Equipment—Domestic and Industrial Hot Water Heaters—Stove Burners—Side-Arm Heaters—Airplane Servicing Equipment.



IN EGYPT—THE OLD AND THE NEW *often meet. Camel, down through the centuries carrier of man and man's burdens, pauses by a Gilbert and Barker T-308 Gasoline Pump, in far away Gizeh, Egypt.*

IN1911: The twelve months that followed the introduction of the first Gilbert and Barker gasoline pump (1910) were ample to shatter whatever, if any, doubts about the future course of Gilbert and Barker in the pump and tank industry. From headquarters in Springfield went sales promotion men to introduce the new equipment. Into hands of prospects went Pump and Tank Catalogue No. 1, sixteen pages, printed in black and white. Pumps listed were these four: (1) the original Model T-1, "Self-draining—made of brass—built for gasoline." (2) Model T-3 Vertical Long Distance Pump—"It will deliver approximately a gallon for every six strokes." (3) Model T-4 Rotary Pump—"Will pump approximately 10 gallons a minute." (4) Model T-6 Single Action Self-Measuring Pump—"The meter gives a 'grand total' of the exact amount of liquid discharged by the pump."

Oil companies were quick to recognize the importance of pumps and tanks as a means of securing and holding business in petroleum products. (As early as January, 1911, Standard Oil Company, New York City Department, 56 New Street, New York, was selling Gilbert and Barker pumps.) The onrush of orders soon taxed manufacturing facilities beyond the limit of the old plant.

The new set of factory buildings in West Springfield (appropriations granted in 1911) loomed large at the time. Man power was doubled from seventy-five to one hundred and fifty.

But soon the new facilities were to prove inadequate—tank and pump business grew and grew as more and more automobiles left the manufacturers' plants and took to the highways. From 1912 to 1920 the plant ran day and night—often as many as 1700 men were on the payroll.

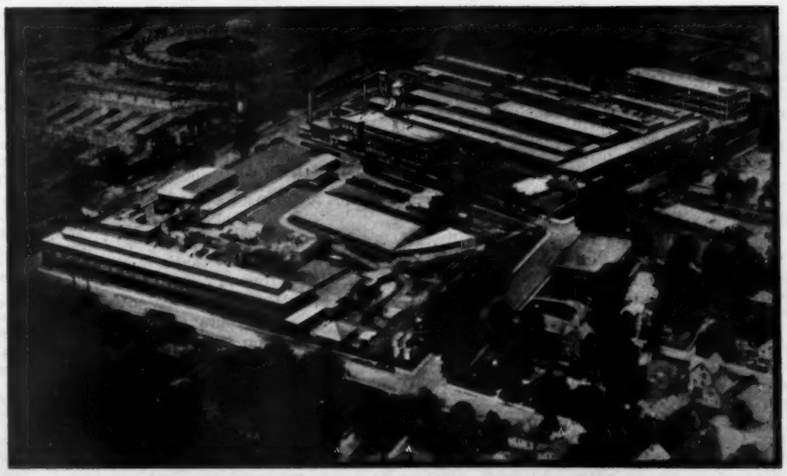
The development of the first Simple T-1 Gilbert and Barker pump proved for all time the importance of the humble casting. (A porous casting means a poor pump!) Where to get quality galvanized castings in quantity sufficient to meet ever-increasing orders for accurate Gilbert and Barker pumps? That was the pressing question until finally, in 1921, Gilbert and Barker established its own foundry, located within a stone's throw of its other manufacturing units. This one foundry can cast forty tons of metal a day. It stands as one of the largest in New England.

To match the cleanliness and accuracy of its equipment to dispense gasoline, Gilbert and Barker was soon called upon to furnish better means of handling lubricating oils. Once again the response was immediate and far-reaching; Gilbert and Barker lubricating outfits (and measuring pumps) have in 24 years found their way to service stations and garages in 108 different countries throughout the world.

IN1917: When America decided to throw her man power into the World War, from Gilbert and Barker came 182 men to serve their country.

The Company's products too were called upon. More than 400 Gilbert and Barker pumps were used by the Allied Forces in France, and proved, once again, their dependability.

To transport petroleum products to wartime France, over 250,000 Springfield steel barrels were manufactured for the Standard Oil Company (New Jersey). In the summer of 1918 production exceeded 2,000 barrels per day.



THE 18-ACRE HOME OF THE CALCO-METER PUMP AT SPRINGFIELD, MASSACHUSETTS. *This plant—with others in Canada and France, and factory branches in all parts of the world—gives Gilbert and Barker unequalled manufacturing facilities and resources, the ability to render prompt and efficient service.*

BEACONS ATTRACTING THE MOTORIST *to the finest of modern gasoline dispensing service are these Gilbert and Barker Model 70 Calco-Meter Automatic Computing Pumps.*

IN1935: Like the 1935 model automobiles which it serves in so many modern service stations, Gilbert and Barker's newest model gasoline pump—the new Model 70 Calco-Meter—offers important features and advantages.

The very styling of this pump immediately suggests to the passing motorist, driving his 1935 car, that here's a station with service as modern as his automobile. One experience with the operation of the Calco-Meter Pump will convince any motorist (especially if he is in a hurry) that here is the most up-to-date of all gasoline dispensing equipment.

Whatever his gasoline order to the station attendant, the motorist who draws up to a Gilbert and Barker Model 70 pump is assured of efficient, accurate and speedy service.

The introduction of the Gilbert and Barker Automatic Computing Pump marks the end of scratch pad arithmetic to compute the amount of sale. This remarkable pump does its own arithmetic continuously as gasoline is dispensed. One glance at the total sales figure dial shows exactly what's due.

The automatic computing features of the Calco-Meter are especially appreciated by service stations handling a heavy volume of Sunday and holiday business. Here is the answer to clearing cars in and out quickly, and without chance of error due to mistakes in computation. Here also is the answer to greater gallonage and greater profits through greater gallonage!

(THIS IS THE FOURTH OF A SERIES OF ADVERTISEMENTS ON THE HISTORY AND GROWTH OF GILBERT AND BARKER MANUFACTURING COMPANY, SPRINGFIELD, MASS.)

Making Oil Containers at the Texaco Can Plant

(Continued from Page 15)

use of an automatic light-oil filling machine which accurately weighs the oil with each container. Once this is completed, the can is sealed and sent to the packing room.

Here two of these filled cans are fitted into a wooden box and the lid of the box is nailed on, the entire procedure being handled automatically. From this machine the box is carried to storage and is stacked. The boxes remain in the storehouse for at least 24 hours in which time if there are any leaks they will show up by stains on the wood. Satisfied that the cases are ready for shipment, men load them on to conveyors leading to the boat. Unique spiral conveyors take the cases down into the hold of the ship at the rate of 50,000 in eight hours. These conveyors may be lifted into or out of the ship in a few minutes by means of cranes.

Shook Factory

The manufacture of the shooks or cases is equally interesting. Briefly stated, the Tupelo gum, which is used exclusively, is brought from the company forests in Louisiana and other sections to the plant in the form of 1-inch boards, after having dried and seasoned for six months.

As the board is taken into the plant, the first operation is to cut it into slabs, one-half as thick as the original board. In the balance of the plant, the slab is dressed smooth and then cut to the desired lengths to form the sides, top and bottom.

A Linderman joiner is used on those parts where two or more pieces are needed to form an end and in addition to the tongue and groove joint, the end is strengthened by the use of metal splicers. Assembly of each case from the cut and fitted pieces is done almost automatically down to the point where eight nails are simultaneously sunk into the wood along each side to form a strong and neatly finished box. At the present rate of operation, about 10,000 cases are turned out daily.

Three Per Cent Deduction Sustained by Judge Vaught

(Continued from Page 11)

the deduction had created a trade practice and the many years of enforcement by state officials, without protest or question of the practice, was a complete recognition of the custom now being questioned by the state.

Judge Vaught held the tax was on the value and that the value of the oil was the price for which a willing purchaser would pay and a willing seller would sell, based upon any measurement agreed to by both.

The state's case against the Stanolind involved taxes accrued since July 1, 1931, when under an amendment of the state gross production tax law it became the duty of the purchaser to compute and deduct the tax from the amount paid to the producer and remit the tax to the tax commission.

Ray S. Fellows and Guy H. Woodward, of Tulsa, and C. B. Cochrane of Oklahoma City, were attorneys for the Stanolind company in the case.

The decision nullified attempts of Gov. W. H. Murray, who had contracted with various attorneys to bring suit against oil producers for the collection of the tax from 1916 to July 1, 1931.

Suit had also been brought in state courts at Seminole against the Gypsy Oil Co., Sinclair Prairie Oil Co., Shell Petroleum Corp., Carter Oil Co. and other companies.

The case is expected to affect a decision of Secretary of the Interior Ickes on the department's recent order that oil firms must pay 100 per cent royalty oil to the Osage tribe on the basis of 100 per cent measurement. The Government's claim is being protested.

The federal decision upholding the 3 per cent deduction is of interest in all oil producing states.

Strengthens Opposition to Federal Oil Control

(Continued from Page 6)

trator Ickes explained, a diversified membership, recognized as competent and impartial, and authorities in their fields, was sought. The members follow:

Paul Blazer, president, Ashland Refining Co., Ashland, Ky., chairman, refiner; Mason Houghland, president, Spud Distributing Co., Nashville, Tenn., marketer; Sidney Swenstrud, economist, Standard Oil Co. of Ohio; H. B. Fell, of Ardmore, Okla., executive vice president of the Independent Petroleum Association of America; R. E. Allen, secretary of the Committee of California Oil Producers, Los Angeles, formerly a member of the voluntary committee on petroleum economics, Federal Oil Conservation Board.

Cost of Production

Statistics dealing with reserves, royalty operations and depreciation, as well as operating and administrative expenses and income are called for by the oil administration as parts of the survey now being made of the costs of producing crude oil during 1934.

The survey, being conducted by the Petroleum Administrative Board, is a continuation of a survey covering 1931, 1932 and 1933 recently completed by the board and two similar studies, covering 1927-1930, made by the Tariff Commission.

The board study continued the method employed by the Tariff Commission but certain operating data regarding wells, producing and proven acreage, and estimated remaining recoverable oil also were obtained. This additional information permitted the segregation of the cost data into several ranges of daily production and also furnished the basis for estimating the national resources of recoverable oil from present producing properties.

Sixteen major points are covered in the 1934 survey questionnaires, which are being sent to approximately 3,500 companies. They are as follows:

Production, current operating costs, general and administrative expenses, depletion of leasehold cost, depreciation of tangible equipment, amortization of drilling and other intangible development costs, total costs, income from sale of oil, production of gas and its market value, miscellaneous revenues, value of fixed assets, value of other assets, data with respect to the number of wells, production shut in and acreage and reserves.

Oil Industry Employment

The oil industry challenged the authority of Administrator Ickes, acting through his Petroleum Labor Board, to grant the request of the International Oil Workers Union for a 30-hour week and increases in wage benefits under the code. It also presented evidence that the industry has made substantial contributions to the recovery program. Louis Titus, counsel for the Planning and Coordination Committee, said the code could only be amended in the same manner as that in which the original code was adopted. This involves application for such amendments by trade associations within the industry. Dr. George W. Stocking, chairman of the board, denied a motion to dismiss the proceedings and said he would submit Mr. Titus' argument to Administrator Ickes for a decision.

Speaking in opposition to the claim of Harvey C. Fremming, president of the union, that the "reabsorption of unemployed by the industry has been practically nil and that its increased wages bill has been a sad disappointment," H. H. Anderson, chairman of the Planning and Coordination Committee's labor subcommittee, reported that between May, 1933, and May, 1934, the industry added at least 200,500 workers to its employment rolls and increased annual payrolls by $231,000,000. To show that there has been no general falling off in employment since May, 1934, he stated that a special survey indicated an increase in employment between May and October, 1934, of about 1 per cent.

He reported that weighted average weekly wages of oil industry workers in May, 1934, were 85.9 per cent of those in 1929, and that their real wage, taking into consideration the cost of living indices, averaged 7.2 per cent in excess of that of 1929. He reported total employment within the industry in May, 1934, as approximately 1,197,000 persons receiving $131,000,000 per month. This was segregated as 250,100 persons receiving $32,500,000 in production, pipe line and refining operations; 147,900 persons receiving $24,905,000 in wholesale marketing, and 799,000 persons receiving $73,372,000 in retail marketing. (The figures reported for production did not include 26,950 persons employed by the rig building and drilling contractors, also bound by the code, and paid indirectly by oil producers.)

Ralph Horween Resigns

Administrator Ickes announced the resignation of Ralph Horween of Chicago as executive assistant, effective February 1.

Widespread Adoption of Solvent Refined Oil Process

(Continued from Page 19)

ing research work and pilot plant operation conducted by the company. The company's dewaxing plant has been in operation for several weeks.

The large extraction installations of the Shell Petroleum Corp. at Wood River, Ill., Standard Oil Co. of California at Richmond, Calif., and the Standard Oil Co. at Baton Rouge, La., are all scheduled to be in regular operation within 90 days. The dewaxing plant of the Standard of Louisiana will start operating this month. The name of Barisol has been adopted for this process which is the first of its kind to be installed on a commercial basis. All the plants listed as "under construction" should be in operation not later than April 1 with the exception of that of Herbert Green & Co., Ltd., at Lincolnshire, for which contracts were recently let.

SURVEY OF SOLVENT EXTRACTION AND DEWAXING PLANTS IN THE WORLD

Solvent Extraction Plants in Operation

Company and refinery location—	Kind of solvent—	Charging stock capacity, bbls.†
Associated Oil Co., Avon, Calif.	SO 2 (Edeleanu Process)	1,500
Atlantic Refining Co., Philadelphia, Pa.	Nitrobenzene	1,000
Gulf Refining Co., Girard Point, Pa.	Duo-Sol (Propane-Cresylic Acid)	1,500
Herbert Green & Co., Ltd., Lincolnshire, England*	Duo-Sol	1,000
Imperial Oil, Ltd., Sarnia, Ontario	Phenol	2,000
Indian Refining Co., Lawrenceville, Ill.	Furfural	1,000
Magnolia Petroleum Co., Beaumont, Tex.	Duo-Sol	2,200
Mid-Continent Petroleum Corp., Tulsa, Okla.	Chlorex (Dichlorethyl ether)	220
Pennzoil Co., Oil City, Pa.	Chlorex	1,000
Shell Oil Co., Martinez, Calif.	S O 2	1,500
Shell Petroleum Corp., Wood River, Ill.*	Duo-Sol	2,500
Sinclair Refining Co., Wellsville, N. Y.	Nitrobenzene-Sulphuric Acid	800
Standard Oil Co. (Indiana), Casper, Wyo.	Chlorex	700
Standard Oil Co. (Indiana), Wood River, Ill.	Chlorex	1,200
Standard Franco-Americaina de Raffinage, Port Jerome, France	Phenol	4,000
Standard Oil Co. of California, Richmond, Calif.*	Aniline Oil§	2,200
Standard Oil Co. of New Jersey, Bayonne, N. J.	Phenol	1,000
Standard Oil Co. of Louisiana, Baton Rouge, La.*	Phenol	3,000
Socony-Vacuum Oil Co., Inc., Paulsboro, N. J.	Duo-Sol	3,400
Socony-Vacuum Oil Co., Inc., Olean, N. Y.	Chlorex	1,600
Union Oil Co., Oleum, Calif.	S O 2-Benzol	1,500
		34,820

Solvent Dewaxing Plants in Operation

Atlantic Refining Co., Philadelphia, Pa.	Benzol-Acetone-Toluol	600
Indian Refining Co., Lawrenceville, Ill.	Benzol-Acetone-Toluol	1,000
Standard Oil Co. (Indiana), Wood River, Ill.*	Propane	1,200
Standard Oil Co. of Louisiana, Baton Rouge, La.	Mixed Chlorinated Solvents (Ethylene Dichloride and others)	1,800
Standard Franco-Americaina de Raffinage, Port Jerome, France	Trichlorethylene	700
Shell Petroleum Corp., Wood River, Ill.*	Propane	2,500
		7,800

*Under construction. †Capacities are estimates. Throughput is largely dependent on properties of charging stock and finished oils obtained. Estimates in some cases indicate expected production of finished oils after operation is on settled basis. §Plan using other solvents also.

INCOME TAX BOOK

In the review of the book, "Federal Income and Estate Tax Laws," printed in the January 10 issue, the price was erroneously stated as $10. The correct price of this book is $15, and orders will be filled by the Book Department of The Oil and Gas Journal at this price.

Chicago District Refined Market Firmer Than Before Court Decision on 9c

By SPECIAL CORRESPONDENT

CHICAGO, Jan. 14.—After the first shock from the Supreme Court's denial of legality of Section 9(c) of the recovery act had passed, oil markets recovered a more nearly normal aspect and at the present time all of the ground which was lost has been recovered and the general tone is perhaps even firmer than before. The first effect was an extreme nervousness. Some sellers decided that it would be the part of wisdom to sell material for what it would bring on the theory that a general market demoralization impended. Thus, the early part of last week saw some offerings of material in the face of a buying trade that not only was reticent about making commitments but that was waiting for still lower prices.

However, it soon became clear that since something of an emergency was at hand, powerful elements were rallying in the interest of stability. Jobbers and other tank car buyers apparently were not anxious to purchase material at whatever price and as a result most sellers came to the conclusion that it would be unwise to dump material upon the market. Collective buying power among refiners began to make its appearance. Coincidentally the Texas authorities jumped into the breach and made it clear they proposed to prevent shipments without tenders. The result of all this was a generally firm tone as the week closed and the new week opened. As a whole, at this writing, no effect of the Supreme Court ruling is in evidence except a crystallization of sentiment favoring every activity that could be concentrated for continued stabilization. The result was a generally firm market situation, with prices about unchanged from a weak earlier. No market demoralization was developing, despite frantic predictions from Washington.

Divided Over Outlook

The trade in this region appears to be divided over the outlook. There is some disposition to believe that the result of the situation sooner or later will be market trouble. However, offsetting this is sentiment in some circles favoring more concerted support by representative market factors. In view of the relatively good statistical situation, it is generally believed here that a genuine, far-reaching program of market stabilization would be carried out without unreasonable outlays.

So far as actual market activity is concerned, business has been slow the past week. Jobbers simply were not interested in purchase of much material in the spot market, regardless of offering prices. However, jobber shipping instructions on contract material have been comparatively good. This is partly forced by the fact that winter consumption is reaching good gallonage totals, thus contradicting gloomy forecasts of some; and jobbers have been forced to take out material. A further angle leading to some encouragement is the fact that tank wagon and service prices have been restored to normal or near-normal levels in the Middle West in the last few days. Even in Chicago, ordinarily the center of much retail market irregularity, there has been a great deal more disposition displayed toward market stability than before the local market was advanced to normal levels recently.

Interested in Quality

Interest continues to be shown in the trade in motor fuels of special quality for winter use. The general trend on the part of leading major companies is to degrade the third grade gasoline which they are selling and to improve the quality of the house brand material which they feature. There is still some inclination and agitation in the trade for the revision of the present octane brackets used by Mid-Continent refiners and there

(Continued on Page 46)

Crude Oil Prices

(Continued from Page 25)

Humble Oil & Refining Co. and Texas Co. Effective September 20 in Salt Flat by Shell Petroleum Corp.

Rocky Mountain States

Iles, light (Sept. 29, 1933)	$.95
Iles, heavy (Sept. 29, 1933)	.90
Florence, Colo. (June 17, 1933)	.80
Fort Collins and Wellington, Colo. (June 17)	(See Salt Creek prices)
Big Muddy (Sept. 29, 1933)	1.01
Frannie, light (May 1, 1934)	.70
Frannie, heavy (Sept. 29, 1933)	.62
Salt Creek and LaBarge (Sept. 29, 1933)	See Stanolind Mid-Continent price schedule
Grass Creek, light (Sept. 29, 1933)	1.18
Grass Creek, heavy (Sept. 29, 1933)	.62
Elk Basin (Sept. 29, 1933)	1.18
Rock Creek (Sept. 29, 1933)	1.02
Lance Creek (Dec. 16, 1932)	.92
Hudson (June 2, 1931)	.65
Lost Soldier (Sept. 30, 1933)	.88
Hamilton Dome:	
Below 18° (July 1, 1934)	.52
18° and above (July 1, 1934)	.62
Torchlight (Sept. 29, 1933)	1.18
Greybull (Sept. 29, 1933)	1.18
Pondera (Sept. 29, 1933)	1.25
Sunburst (Sept. 29, 1933)	1.35
Cat Creek, Montana	1.07
Hogback (Sept. 29, 1933)	1.11
Lea County, N. Mex. (Sept. 29, 1933)	.75
Maljamar (Sept. 29, 1933)	.70
Artesia-Jackson (Dec. 1, 1933)*	.75

Note—Salt Creek, Torchlight, Elk Basin, Grass Creek, Frannie, Greybull, Hogback and Iles by Stanolind Oil & Gas Co. Elk Basin, Grass Creek light, Big Muddy, Rock Creek and Sunburst by Ohio Oil Co. Lost Soldier posted by Producers & Refiners Corp. Artesia, Jackson and Maljamar posted by Continental Oil Co. Lea County, effective September 29, 1933, by Humble Oil & Refining Co. and other buyers; Fort Collins, Wellington, Orchard, Florence, Big Muddy, Cat Creek, Rattlesnake and Table Mesa by Continental Oil Co. Osage posted by Arro. Hamilton Dome, Wyo., by Stanolind Oil & Gas Co.

*Continental Oil Co.

North Louisiana and Arkansas

Smackover, Ark. (all grades)	$.70
Tullos, Urania, La. (Jan. 13, 1934)	.87
Nevada, Ark. (Sept. 29, 1933)	.60
East El Dorado (Sept. 29, 1933)	.70
Converse, La. (Mar. 17, 1934)	1.03
Elm Grove, La. (Sept. 29, 1933)	.75
Holly, La. (Nov. 17, 1934)	1.03
Pleasant Hill, La. (Mar. 17, 1934)	1.03
Zwolle, La. (Mar. 17, 1934)	1.03
Champagnolle, Ark. (Mar. 17, 1934)	.81
Lisbon, Ark. (Mar. 17, 1934)	1.03
Stephens, Ark. (Sept. 29, 1933)	.70
Urbana, Ark. (Mar. 17, 1934)	.60
Other fields	(See gravity table)

Note—Smackover: Effective September 29, 1933, Texas Co., Magnolia Petroleum Co., Standard of Louisiana, Louisiana Oil Refining Corp., Gulf Refining Co. and Phillips Petroleum Co. East El Dorado posted by Magnolia Petroleum Co. and Gulf Refining Co., Nevada by Standard Oil Co. of Louisiana. Urbana posted by H. L. Hunt, Inc., and Louisiana Oil Refining Co. Converse, Holly, Zwolle and Urbana by Standard Oil Co. of Louisiana; Elm Grove by Simmons Oil & Refining Co.; Pleasant Hill by Standard Oil Co. and Magnolia Petroleum Co. Champagnolle by Standard Oil Co. and Lion Oil & Refining Co.

Eastern States

TIDE WATER PIPE CO.
(Effective Jan. 4, 1935)

Bradford, Pa.	$2.20
Allegany, N. Y.	2.20

SOUTH PENN OIL CO.
(Effective Jan. 4, 1935)

Pennsylvania Grade Oil in National Transit Lines (Bradford Field)	$2.20
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	1.87
Pennsylvania Grade Oil in Eureka Pipe Line lines	1.82
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.72
Corning Grade Oil in Buckeye Pipe Line Co.'s lines (Oct. 2, 1933)	1.37

PENNZOIL CO.
(Effective Jan. 4, 1935)

Pennsylvania Grade Oil in National Transit Lines:	
Group A (Includes Cochran, Franklin, Hamilton and Doolittle districts.)	$2.12
Group B (Includes Titusville district.)	2.11
Group C (Includes Turkey and Tidioute districts.)	2.10
Group D	2.09
Includes Bear Creek and Porkey districts.	
Group E	2.06
Includes Eldeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredin, McJunkin, Jameson, Kennerdell, Emlenton, Tiona, Lacey and Kinzua districts. Price depends on length of pipe line haul to plant at Oil City.	

PURE OIL CO.
(Effective Jan. 4, 1935)

Cabin Creek, W. Va.	$1.82
Bradford Hollow, W. Va.	1.82
Kelly Creek, W. Va.	1.77

CREW-LEVICK CO.
(Effective Jan. 4, 1935)

Oil City-Titusville	2.12

Middle Western States

OHIO OIL CO.
(Effective September 29, 1933)

Lima	$1.30
Illinois (Jan. 5, 1934)	1.13
Princeton, Ind. (Jan. 5, 1934)	1.13
Plymouth	Shut in
Western Kentucky (May 26, 1934)	1.08
Midland, Mich. (Sept. 30, 1933)*	1.02
West Branch, Mich.	.86
Oceana, Mich. (Oct. 5, 1933)	.90
Somerset, Ky. (Sept. 30, 1933)	1.23

*Posted by Pure Oil Co. and Simrall Pipe Line Co. Producers Pipe Line Co. pays 5 cents per barrel over Pure Oil Co.'s posted prices. West Branch, Mich., posted by Simrall Pipe Line Co. Somerset, Ky., crude purchased by Ashland Refining Co., Ashland, Ky., and posted price includes premium. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co.

Canada

Ontario (September 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (May 21, 1934):†	
Clear naphtha	$2.55
Discolored naphtha	2.37
Crude oil, 50 gravity	2.19
Crude oil, 45 to 49.9	2.07
Crude oil, 40 to 44.9	1.50

*Imperial Oil, Ltd. †Imperial Oil, Ltd. and Regal Oil & Refining Co.

Mexico

Panuco*	$1.00

*F.o.b. ship, based on November transactions and exclusive of production and export taxes and bar dues.

California Crude Oil Prices

STANDARD OIL CO. OF CALIFORNIA

(Effective September 6, 1933)

For current purchases of crude oil at the well (unless otherwise specified). (All gravities above those quoted take highest price offered in that field.)

Gravity—	Long Beach	Seal Beach, Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda, Brea Canyon	Athens-Rosecrans	Torrance	Richfield	Whittier, La Habra	Montebello	Santa Fe Springs	La Habra-Coyote	Midway-Sunset, Elk Hills, Buena Vista Hills	Lost Hills	Coalinga	Coyote
14-14.9	$.65	$.65	$.65	$.65	$.65	$.65	....	$.65	$.65	$.65	$.65	....	$.65	$.57	$.57	$.57	$.65
15-15.9	.65	.65	.69	.69	.66	.69	....	.66	.65	.65	.65	....	.65	....	....	....	.65
16-16.9	.66	.65	.72	.72	.69	.72	....	.69	.67	.68	.65	....	.65	....	....	....	.65
17-17.9	.69	.65	.75	.76	.73	.76	....	.72	.70	.71	.65	....	.68	....	....	....	.68
18-18.9	.72	.65	.78	.80	.76	.79	....	.75	.74	.74	.65	....	.71	.61	.61	.59	.71
19-19.9	.75	.65	.81	.83	.80	.82	....	.78	.78	.78	.65	....	.74	.64	.65	.62	.74
20-20.9	.78	.68	.83	.87	.83	.85	....	.81	.82	.81	.66	....	.78	.67	.69	.65	.78
21-21.9	.81	.72	.86	.90	.87	.88	....	.83	.85	.84	.69	$.72	.81	.70	.73	.68	.81
22-22.9	.84	.76	.89	.94	.90	.92	....	.85	.89	.87	.72	.76	.84	.73	.76	.72	.84
23-23.9	.88	.81	.92	.97	.94	.95	$.83	.89	.92	.90	.76	.79	.87	.77	.79	.75	.87
24-24.9	.91	.85	.95	1.01	.97	.98	.86	.92	.97	.93	.80	.83	.90	.81	.82	.78	.90
25-25.9	.94	.89	.98	....	1.00	1.01	.90	.95	1.00	...	.85	.87	.93	.85	.85	.81	.93
26-26.9	.97	.93	1.01	....	1.04	1.04	.94	.98	1.04	....	.89	.90	.96	.89	.88	....	.96
27-27.9	1.00	.98	1.04	....	..	1.07	.97	....	1.08	....	....	.94	.99	.93	.91	....	.99
28-28.9	1.02	1.02	1.07	....	....	1.10	1.01	....	1.11	....	....	.98	1.02	.97	.94	....	1.02
29-29.9	1.06	1.05	1.09	....	....	....	1.04	....	1.15	....	....	1.01	1.05	1.01	.97	....	1.06
30-30.9	1.09	1.10	1.12	....	....	....	1.08	....	....	....	....	1.05	1.09	1.05	1.00	....	1.09
31-31.9	....	....	....	....	....	....	1.12	....	....	....	....	1.08	1.12	1.09	....	....	1.12
32-32.9	....	....	....	....	....	....	1.15	....	....	....	....	1.12	1.15	1.13	....	....	1.15
33-33.9	....	....	....	....	....	....	....	....	....	....	....	1.16	1.18	1.17	....	....	1.18
34-34.9	....	....	....	....	....	....	....	....	....	....	....	1.19	1.21	....	....	....	1.21
35-35.9	....	....	....	....	....	....	....	....	....	....	....	1.23	....	....	....	....	....
36-36.9	....	....	....	....	....	....	....	....	....	....	....	1.26	....	....	....	....	....
37-37.9	....	....	....	....	....	....	....	....	....	....	....	1.30	....	....	....	....	....
38-38.9	....	....	....	....	....	....	....	....	....	....	....	1.34	....	....	....	....	....

Additional Standard Oil Quotations

Mountain View—Effective July 2, 1934, the following are the pri of the Standard Oil Co. of California for its current purchases of crude oil at the well in the Mountain View Field: 14 to 19.9 degrees, 57 cents; 20-20.9, 58 cents; 21-21.9, 59 cents; 22-22.9, 61 cents; 23-23.9, 62 cents; 24-24.9, 64 cents; 25-25.9, 69 cents; 26-26.9, 73 cents; 27-27.9, 75 cents; 28-28.9, 78 cents; 29-29.9, 81 cents; 30-30.9, 84 cents; 31-31.9, 87 cents; 32-32.9, 90 cents; 33 degrees and above, 93 cents.

Elwood Terrace—F.o.b. ship, 33 degrees, $1.03; 34 degrees, $1.06; 35-35.9, $1.09; 36-36.9, $1.12; 37 degrees and over, $1.15.

Newhall—14 degrees and over, 57 cents.

McKittrick and Kern River—14 degrees and over, 57 cents.

Wheeler Ridge—14 to 17.9 degrees, 57 cents; 18-18.9, 58 cents; 19 19.9, 61 cents; 20-20.9, 64 cents; 21-21.9, 67 cents; 22-22.9, 70 cents; 23-23.9, 73 cents; 24-24.9, 76 cents; 25 degrees and over, 79 cents.

Kettleman Hills—32-33.9 degrees, 93 cents; 34-34.9, 96 cents; 35- 5.9, 99 cents; 36-36.9, $1.02; 37-37.9 $1.05; 38-38.9, $1.08; 39 degrees and over, $1.11.

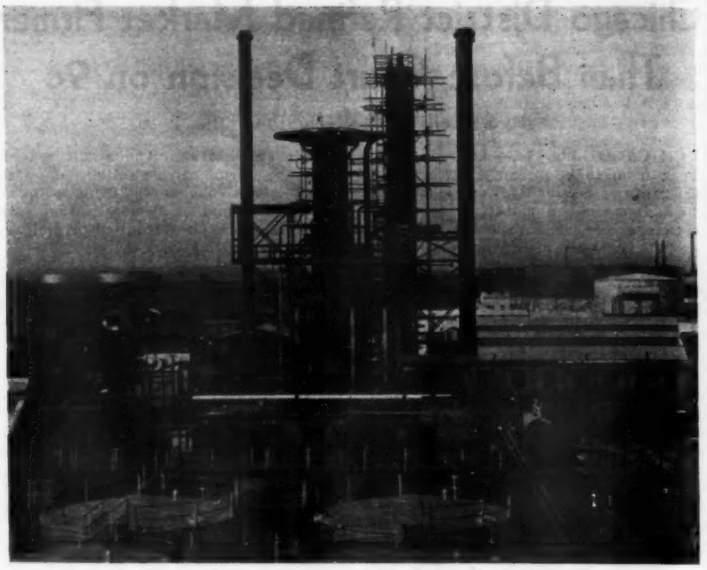
The Texas Co. posted in Shiells Canyon, South Mountain and Santa Paula as follows: 14 to 17.9, 57 cents; 3 cents added for each degree up to and including 26-26.9 degrees at 84 cents; then 4 cen added for each degree up to and including 30 degrees and over at $1. Company posts Standard Oil Co.'s Montebello prices in Montebello and North Whittier, and posts Standard Oil Co. prices in Signal Hill, Alamitos Heights, Huntington Beach, Torrance, Richfield and Santa Fe Springs, all effective September 6.

General Petroleum Co. posts Standard Oil Co. prices in Athens, Rosecrans and Signal Hill; Alamitos Heights up to 26-26.9; Santa Fe Springs up to 35-35.9; Richfield up to 25-25.9; Brea Canyon an Olinda up to 25-25.9, and Torrance up to 25-25.9.

Union Oil Co., effective September 6, posts same price as Standard Oil Co. in all fields in which both purchase, excepting that in Athens-Rosecrans, Union Oil Co. posts 21-21.9, 72 cents, and 33-33.9, $1.18; 34-34.9, $1.21, and 35-35.9, $1.24.

Associated Oil Co., effective September 6, posted same prices for the same grades as Standard Oil Co. of California, excepting that in some fields its gravity scale stops as follows: Huntington Beach, 26 degrees and over; Seal Beach and Alamitos Heights, 26 degrees and over; Coyote Hills, 23 degrees and over; Richfield, 25 degrees and over; Torrance, 25 degrees and over; Inglewood, 24 degrees and over; Santa Fe Springs, 35 degrees and over; Midway-Sunset, Elk Hills, Buena Vista Hills, 30 degrees and over. Also Associated pays 52 cents for oil of 11 to 13.9 gravity in McKittrick, Kern Front, Kern River, Midway-Sunset, Elk Hills, Buena Vista Hills and Coalinga.

New Refinery in England Manufactures Products From Peruvian Crude



View of the new refinery of the Lobitos Oilfields, Ltd., located at Ellesmere Port, England.

The Lobitos Oilfields, Ltd., which for several years has been an important producer of crude oil in Peru recently completed the construction of the only new refinery built in England over the past year. The plant, which has a capacity of 2,500 bbls. daily, is operating with Peruvian crude oil manufacturing light products and several lubricating oils, distillates, cylinder stocks and asphalt, suitable for the markets of Great Britain. The plant is located at Ellesmere Port, England.

The refinery processing at present consists of a topping operation to secure gasoline, kerosene and white spirits from the crude oil by atmospheric distillation followed by a vacuum operation in which the topped crude oil is the charging stock. The two-stage operation is continuous with several features interrelated in order to secure the greatest efficiency. The following description of the distillation processes is based on data furnished by the company's manufacturing department.

For the topping operation, a Stratford oil circulation fractionating unit, suitable for the manufacture of all white products, was selected. The unit is so named owing to the use therein of the "Stratford oil circulation radiant heater," a heater of unique design. This consists of a corrugated firing tube 4 feet in diameter by 12 feet long, on the outside of which is a second tube or nozzle sheet. Into the nozzle sheet, at frequent fixed locations, "oil circulation nozzles" are inserted, placed at 90 degrees to the corrugated surface, and through which circulating oil flows at a velocity of 90 to 100 feet per second.

This results in high average transfer rates, in many cases as high as 85,000 B.t.u. per square foot of heating surface. The oil thus jetted against the firing tube flows in the annular space between the corrugated tube and the nozzle sheet, accumulating in mass, hence in velocity, towards a roundabout collecting header at the fired end of the heater, from which it flows to the vaporizing tower.

The circulating oil is distributed under pump pressure to the nozzles from a circular header around the middle of the heater and then toward the fired end and toward the back of the heater, between the nozzle sheet previously described and a third or outside sheet which provides the annular space for the inlet oil.

Combustion

The combustion is supplied by a Peabody mechanical atomizing wide range oil burner, to which preheated air is furnished at a temperature of approximately 608° F., and at a fan pressure of approximately 8 inches of water, under inlet damper control. The flue gas from the firing tube, under stack draft, passes through a tubular convection section, in which the crude charge is preheated, thence to the air preheater mentioned above and out to stack. With the exception of the refractory burner throat, no masonry is required in the entire system, thus removing all possibility of residual heat, and dispensing with masonry maintenance and repair.

Method of Operation

Crude oil is supplied to a multistage centrifugal pump, capable of 210 pounds per square inch discharge pressure. The charge to the unit is automatically controlled by a Foxboro stabilog flow controller. The crude oil flows through heat exchangers and condensers for heat recuperation, thence to a decelerating type of pressure settler for the removal of water and impurities. A steam crude preheater, ahead of the settler, provides a means of charging heated crude to a time. From the crude settler, the oil flows through the tubular convection section where its temperature is raised by the flue gas, and where considerable cold unit and precludes the possibility of charging wet crude to the unit at any vaporization takes place. Thence the mixed oil and vapor, at temperatures ranging from 320 to 383° F. (depending upon the method of operation) flows to tower No. 1, or the gasoline tower.

From the top of tower No. 1 is taken in the vapor phase, a gasoline of desired endpoint ranging from a gasoline of aviation distillation range, or 284° F., to the normal motor spirit of 392° F. endpoint.

The endpoint is automatically controlled by a Leeds and Northrup pyrometer control. The accuracy of this control is such that the temperature of the top of the tower is controlled to plus or minus 2 degrees, and so flexible that a change of dial setting by the plant operator regulates with precision the endpoint of the gasoline manufactured.

Stripping plates are provided below the point of injection and the base of the tower is equipped with a vertical small tube thermo-syphon circulation type of reboiler for the purpose of stripping from the crude the last trace of overhead product. This permits a maximum yield of the overhead product, under conditions of easy control, and absolute control of the initial boiling point of the next succeeding product which may be either white spirits or kerosene, depending upon the endpoint of the gasoline manufactured. In either case, positive control of the flash point is readily attained.

From the base of tower No. 1, the hot crude, stripped of its gasoline, flows by gravity to the inlet line to vaporizer tower No. 2, where it joins the heated circulating oil flowing from the outlet of the oil circulation heater. The vaporizer serves as a reservoir for the oil circulation heater. It is a vertical tower, through the bottom of which passes a horizontal perforated tube. To the portions of the tube which pass through the vaporizer shell, two specially designed vertical single stage hot oil circulating pumps are attached. The larger of these pumps has a capacity of approximately 3,000 gallons per minute at a discharge pressure of three atmospheres and supplies the circulation oil to the heater, as previously described. The other pump furnishes hot oil to the reboilers at the base of No. 1 tower and at the base of No. 3 tower, and maintains the discharge of unstripped residuum to stripping tower No. 4, under automatic Foxboro stabilog averaging liquid level control, thus providing a constant level in the vaporizer tower No. 2, and a resultant constant "liquid head" of oil for feeding these two pumps.

The oil used for a heating medium in the reboilers is returned to the vaporizer, so that the quantity of oil circulated in no way effects the liquid level in the vaporizer.

The 3,000 gallons per minute of circulating oil flowing from the radiant heater provides an excellent heat source for raising the temperature of the topped crude from tower No. 1, to distillation point, since the ratio of circulation to crude feed is approximately 50 to 1. The circulation oil, mixed with the topped crude and its vapor, enters a spiral centrifugal separating head in the top of the vaporizer and the mixed vapors are then introduced under the rectifying plates and over the stripping plates of tower No. 3.

The residuum, as yet unstripped, circulates within the system only enough being drawn off to (a) maintain the vaporizer level and (b) provide the charge to the vacuum unit, after it is stripped in tower No. 4 of its low boiling point constituents.

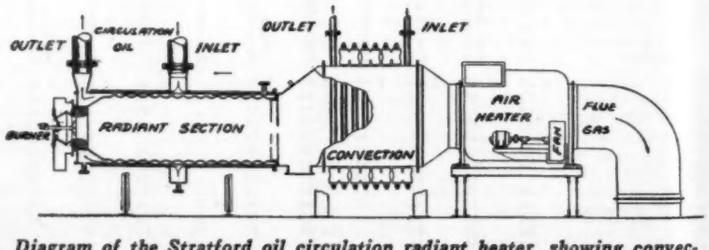
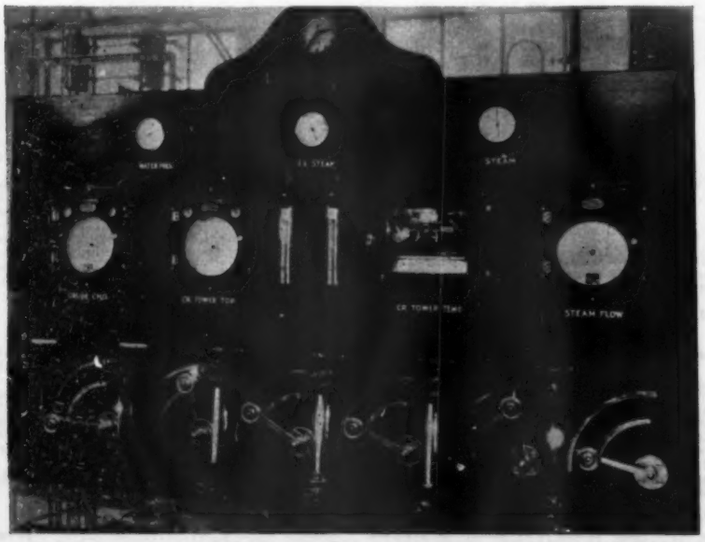


Diagram of the Stratford oil circulation radiant heater, showing convection and radiant sections for crude.



View of control room at Lobitos refinery with unusual arrangement for control of all side streams from towers

Radiant Heater

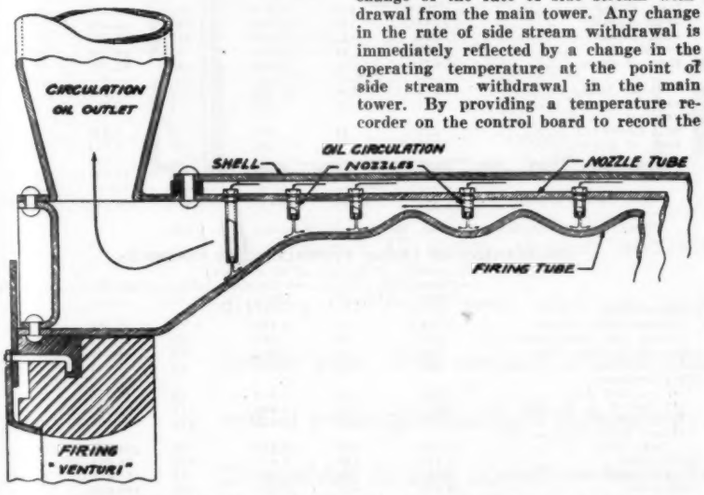
No crude oil enters the radiant heater. The difference of temperature between inlet and outlet of the heater is less than 10° F., and no vaporization takes place

therein. The heater merely serves as a means of supplying the necessary B.t.u.'s to the heating medium for the purpose of raising the charge to required temperature by direct contact heating, oil to oil.

As stated above, the mixed vapor from vaporizer tower No. 2 is introduced under the rectifying plates and above the stripping plates of tower No. 3, from the top of which is removed, in vapor phase (under the same control conditions as tower No. 1), either a white spirit of 392-410° F., endpoint, when aviation gasoline is being manufactured simultaneously in tower No. 1, or alternatively, kerosene of 518-572° F. endpoint, when motor fuel is being manufactured.

The base of tower No. 3 is equipped with a thermo-syphon reboiler the same type as previously described for tower No. 1. It provides assurance of a maximum yield of overhead product, from this tower and the production of a cleanly fractionated gas-oil from the bottom of the tower. Since the base of tower No. 3 refluxes automatically to the residuum stripper, tower No. 4, the possibility of low boiling point components being present in the charge to the vacuum unit is completely avoided.

The unstripped residuum from vaporizer tower No. 2 is introduced on the top plate of tower No. 4, where it flows



Section of the oil circulation radiant heater showing nozzles and nozzle tube

downward against superheated steam for the removal of light components. The top plate is refluxed from the base of tower No. 3, and the vapor plus steam passes through the entire length of tower No. 3, thus providing the latter with stripping steam.

Vacuum Operation

The bottoms from the atmospheric unit, tower No. 4, thoroughly stripped of light components, constitutes the hot charges to the vacuum pipe still. A Foxboro flow controller regulates the charge to the unit. In the pipe still the bottoms are heated, in convection and radiant surface, to a transfer temperature of approximately 775° F., at which temperature the partially vaporized charge is introduced into the flash zone of the fractionating tower, equipped with the required bubble trays. The increased cross sectional area of the path of flow through the heating coil permits maximum vaporization to take place within the tubes where latent heat can be supplied by direct fire, instead of from sensible heat in the flash chamber, thereby insuring the lowest possible outlet temperature for a given percentage of vaporization.

The light spindle oil is removed, in vapor phase, from the top of the vacuum tower under Leeds and Northrup anticipating top-tower control and is condensed and collected in a receiver from which the reflux pump takes suction. The product light spindle oil is pumped from the same receiver, through coolers, to storage.

Elliott multi-stage steam jet ejectors, in combination with an Elliott barometric condenser, are used for the production of vacuum and the condensation of process steam. The vacuum condenser is equipped with a mist extractor thus avoiding mechanical entrainment of oil with steam and noncondensible gases, with the result that practically no oil is lost in the hot well.

Automatic Control

The Alco method of side stream regulation centralizes the control of all side streams in the control house. With this type of control all adjustments or changes in specifications of side streams are made at the control board, whereas with the conventional systems in use, the operator must regulate by means of valves at the drawoff points on the tower structure.

The rate of withdrawal of a side stream from the external stripping section is controlled by the micrometer control valve mounted on the instrument board in the control house. The rate of flow of side stream to the external stripping section from the main tower is in turn controlled by a direct connected liquid level controller located in the base of the external stripping section. By these means, any change in the setting of the micrometer valve in the control house is immediately followed by a change of the rate of side stream withdrawal from the main tower. Any change in the rate of side stream withdrawal is immediately reflected by a change in the operating temperature at the point of side stream withdrawal in the main tower. By providing a temperature recorder on the control board to record the temperature in the main tower at the points of side stream withdrawal the operator has before him at all times a continuous record of tower conditions and any adjustments in the side stream may be made by the operator without leaving the receiving house.

Heavy spindle oil, light machine oil, heavy machine oil and cylinder stock are removed from their respective plates of the vacuum tower and each stream has its individual steam stripper. The process steam required in the strippers is exhaust steam from the pumps which has been superheated in the pipe still. All side streams are partially cooled and then flow to receiver tanks from which the product pumps take suction, discharging through final coolers to storage.

The drawoff of each product is controlled by a combination of a liquid level controller on the base of each stripper, which regulates the flow to the stripper and a control valve mounted on the control board which regulates the discharge of the product to storage. All receiving tanks are equipped with liquid level light indicators located on the control board, which also has gauge glasses showing all flowing streams.

Bitumen is withdrawn from the base of the vacuum tower, cooled and pumped to storage.

The design of the atmospheric stage was based on plans prepared by the Stratford Engineering Corp. and the vacuum stage is the standard type of unit installed by the Alco Products International, Paris, with fabrication by Messrs. Babcock & Wilcox, Ltd.

What is it worth to you?

If you could boost your yield of gasoline, how much would each percent of increase be worth to you?

If you could raise the anti-knock value of that gasoline, how much would each added octane number be worth?

Figure it out on the basis of your own operations.

You CAN increase yield and knock rating—ask Parsons.

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It will cost you nothing to find out.

PARSONS

THE RALPH M. PARSONS CO.

MT. VERNON, OHIO

Bureau of Mines Statistics for Month of November, 1934

SUPPLY AND DEMAND OF ALL OILS

(Thousands of barrels of 42 gallons)

	Nov., 1934	Oct., 1934	Nov., 1933	Jan.-Nov., 1934	Jan.-Nov., 1933
NEW SUPPLY:					
Domestic production:					
Crude petroleum	72,463	76,776	69,966	834,335	833,499
Daily average	2,415	2,477	2,332	2,498	2,496
Natural gasoline	3,212	3,238	2,948	32,981	30,789
Benzol*	114	112	116	1,477	1,248
Total production	75,789	80,126	73,030	868,793	865,536
Daily average	2,526	2,585	2,434	2,601	2,591
Imports:					
Crude petroleum	†2,653	†2,366	1,875	30,404	29,017
Refined products	1,156	1,378	975	13,691	12,659
Total new supply, all oils	79,598	83,870	75,880	912,888	907,212
Daily average	2,653	2,705	2,529	2,733	2,716
Decrease in stocks, all oils	10,265	7,586	8,584	32,897	‡14,891
DEMAND:					
Total demand	89,863	91,456	84,464	945,785	892,321
Daily average	2,995	2,950	2,815	2,832	2,672
Exports:					
Crude petroleum	4,680	3,277	3,305	38,691	33,948
Refined products	6,131	5,957	6,350	67,186	64,190
Domestic demand:					
Motor fuel	34,839	37,544	30,312	375,752	348,431
Kerosene	4,368	3,957	3,777	39,209	34,333
Gas oil and fuel oil	29,142	27,906	29,927	298,098	285,385
Lubricants	1,496	1,677	1,530	17,094	15,507
Wax	61	75	114	795	1,145
Coke	511	629	1,193	6,863	9,177
Asphalt	1,023	1,491	775	12,447	11,047
Road oil	257	692	316	7,711	5,036
Still gas (production)	3,622	3,787	3,466	40,573	41,655
Miscellaneous	265	131	96	1,698	1,327
Losses and crude used as fuel	3,529	4,335	3,303	39,668	41,140
Total domestic demand	79,052	82,222	74,809	839,908	794,183
Daily average	2,635	2,652	2,494	2,515	2,378
STOCKS:					
Crude petroleum	341,165	346,415	355,199	341,165	355,199
Natural gasoline	3,714	4,176	3,131	3,714	3,131
Refined products	224,437	228,990	248,755	224,437	248,755
Total, all oils	569,316	579,581	607,085	569,316	607,085
Days' supply	190	196	216	201	227

*From coal division. †Receipts of foreign crude as reported to Bureau of Mines. ‡Increase.

COMPARATIVE ANALYSES

(Thousands of barrels of 42 gallons)

	November, 1934 Total	November, 1934 Dly. av.	October, 1934 Total	October, 1934 Dly. av.	Jan.-Nov., 1934	Jan.-Nov., 1933
CRUDE PETROLEUM:						
Runs to stills	73,375	2,446	75,388	2,432	817,326	790,814
MOTOR FUEL:						
Production	35,299	1,177	36,231	1,169	387,103	375,756
Imports	.....	.....	.....	.....	1	14
Exports*	2,207	74	1,966	63	23,130	27,672
Stocks:						
Gasoline	43,802	.....	45,087	.....	43,802	50,846
Natural gasoline	3,714	.....	4,176	.....	3,714	3,131
Domestic demand	34,839	1,161	37,544	1,211	375,752	348,431
KEROSENE:						
Production	4,739	158	4,822	156	48,749	44,688
Imports	.....	.....	.....	.....	.....	.....
Exports	633	21	975	31	8,974	8,091
Stocks	7,123	.....	7,385	.....	7,123	7,297
Domestic demand	4,368	146	3,957	128	39,209	34,333
GAS OIL AND FUEL OIL:						
Production	26,775	893	27,064	873	297,268	283,586
Tranfers†	941	31	620	20	7,463	6,558
Imports:						
Bonded warehouses	435	14	503	16	8,272	6,477
For domestic use	472	16	514	17	3,828	5,946
Exports	2,394	80	2,237	72	25,574	18,084
Stocks	116,163	.....	119,076	.....	116,163	129,851
Domestic demand	29,142	971	27,906	900	298,098	285,385
Railroad (Class I)‡	(§)	(§)	3,997	129	¶36,713	¶33,198
Pub. util. pow. plants‖	801	27	905	29	9,426	8,986
Other	28,341	944	23,004	742	251,959	243,201
Bunker oil	2,183	73	2,289	74	26,652	29,078
LUBRICANTS:						
Production	2,062	69	2,145	69	23,999	21,563
Imports	.....	.....	.....	.....	.....	1
Exports	665	22	494	16	7,094	7,494
Stocks	6,841	.....	6,939	.....	6,841	7,257
Domestic demand	1,495	50	1,677	54	17,094	15,507
WAX (thousands of pounds):						
Production	39,480	1,316	39,480	1,274	431,200	427,840
Imports:						
Bonded warehouses	.....	.....	.....	.....	3,542	1,620
For domestic use	2,210	74	2,507	81	33,153	28,235
Exports	17,483	583	16,871	544	182,525	228,279
Stocks	130,222	.....	123,090	.....	130,222	73,079
Domestic demand	17,084	569	21,008	678	222,981	320,272
COKE (short tons):						
Production	113,200	3,773	129,200	4,168	1,202,600	1,451,400
Stocks	458,700	.....	464,100	.....	458,700	760,300
ASPHALT:						
Production	215,100	7,170	267,300	8,623	2,522,500	2,164,800
Imports (natural)	800	27	.....	.....	15,800	17,600
Stocks	306,800	.....	291,900	.....	306,800	258,900

*Includes benzol—13,294 bbls. in November, 1934. †Net transfers in California. ‡Interstate Commerce Commission. §Not available. ¶January-October. ‖U. S. Geological Survey.

INDICATED DOMESTIC DEMAND FOR CRUDE PETROLEUM

(Thousands of barrels of 42 gallons)

Domestic petroleum by fields of origin:	November, 1934 Total	November, 1934 Dly. av.	October, 1934 Total	October, 1934 Dly. av.	Jan.-Nov., 1934	Jan.-Nov., 1933
Appalachian:						
Pennsylvania Grade	1,945	65	2,126	69	22,577	20,595
Other (inc. Kentucky)	537	18	642	21	6,274	5,902
Lima-N. E. Ind.-Mich.	1,067	36	955	31	11,174	7,617
Ill.-S. W. Ind.	467	15	340	11	4,596	4,711
Mid-Continent:						
N. La. and Ark.	1,888	62	1,752	56	20,411	21,000
W. Tex.-S. E. N. Mex.	5,491	183	6,015	194	64,541	67,703
East Texas	15,866	529	18,069	583	181,323	
Other (Okla., Kans., N. Tex., etc.)	27,403	913	26,105	842	288,353	443,435
Gulf Coast	7,198	240	7,544	243	72,751	69,934
Rocky Mountain	1,782	59	1,732	56	16,220	13,966
California	13,552	452	13,354	431	152,649	152,152
Total demand	77,196	2,573	78,634	2,537	840,869	807,015
Exports	4,680	156	3,277	106	38,691	33,948
Domestic demand	72,516	2,417	75,357	2,431	802,178	773,067
Foreign petroleum	2,468	82	2,467	80	30,404	32,881
Total domestic demand	74,984	2,499	77,824	2,511	832,582	805,948

PRODUCTION OF CRUDE PETROLEUM BY STATES AND PRINCIPAL FIELDS

(Thousands of barrels of 42 gallons)

	November, 1934 Total	November, 1934 Dly. av.	October, 1934 Total	October, 1934 Dly. av.	Jan.-Nov., 1934	Jan.-Nov., 1933*
Arkansas	871	29	927	30	10,202	10,748
California:						
Huntington Beach	1,177	39	1,218	39	13,842	11,540
Kettleman Hills	1,771	59	1,838	59	19,550	19,983
Long Beach	1,824	61	1,860	60	21,164	22,502
Santa Fe Springs	1,166	39	1,131	37	13,524	16,927
Rest of State	8,397	280	8,407	271	92,585	86,447
Total California	14,335	478	14,454	466	160,666	157,399
Colorado	105	3	103	3	1,066	844
Illinois	305	10	352	11	4,131	3,866
Indiana	58	2	66	2	750	667
Kansas	3,679	123	3,987	129	42,622	38,496
Kentucky	438	15	458	15	4,412	4,222
Louisiana:						
Gulf Coast	2,379	79	2,433	79	20,759	13,932
Rest of State	722	24	737	23	8,314	9,057
Total Louisiana	3,101	103	3,170	102	29,073	22,989
Michigan	780	26	921	30	9,833	7,050
Montana	398	13	414	13	3,391	2,068
New Mexico	1,448	48	1,457	47	15,437	12,844
New York	335	11	350	11	3,464	2,883
Ohio:						
Central and Eastern	284	9	296	10	3,007	2,949
Northwestern	75	3	91	3	907	953
Total Ohio	359	12	387	13	3,914	3,902
Oklahoma:						
Oklahoma City	4,705	157	4,785	154	57,970	62,466
Seminole	2,964	99	3,074	99	35,126	38,129
Rest of State	6,381	212	6,712	217	72,825	66,426
Total Oklahoma	14,050	468	14,571	470	165,921	167,021
Pennsylvania	1,210	40	1,270	41	13,309	11,550
Tennessee	1	.....	1	.....	10	5
Texas:						
Gulf Coast	4,793	160	5,060	163	54,905	55,974
West Texas	4,045	135	4,186	135	45,992	51,418
East Texas	13,360	445	15,453	499	167,805	190,982
Panhandle	1,699	57	1,762	57	18,508	15,408
Rest of State	5,670	189	5,892	190	63,168	59,328
Total Texas	29,567	986	32,353	1,044	350,378	373,110
West Virginia	327	11	374	12	3,762	3,489
Wyoming:						
Salt Creek	527	18	580	19	5,940	6,450
Rest of State	569	19	581	19	6,054	3,869
Total Wyoming	1,096	37	1,161	38	11,994	10,319
Total United States	72,463	2,415	76,776	2,477	834,335	833,499

*Final figures—includes Alaska, Mississippi, Missouri and Utah.

PRODUCTION OF CRUDE PETROLEUM BY DISTRICTS

(Thousands of barrels of 42 gallons)

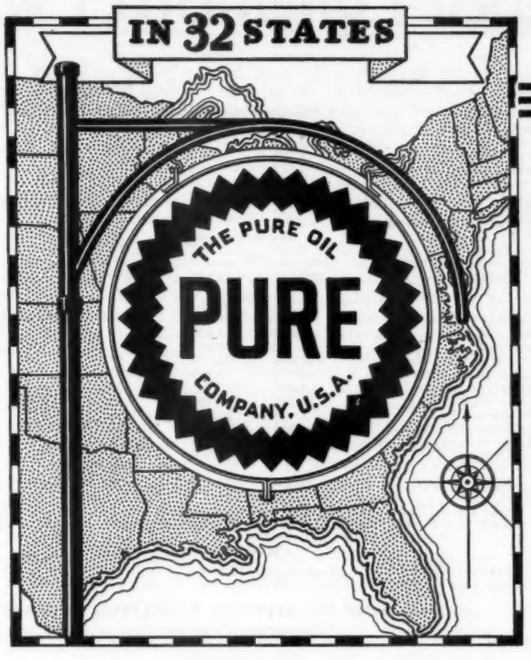
	November, 1934 Total	November, 1934 Dly. av.	October, 1934 Total	October, 1934 Dly. av.	Jan.-Nov., 1934	Jan.-Nov., 1933
Appalachian:						
Pennsylvania Grade	2,016	67	2,140	69	22,006	19,375
Other (inc. Kentucky)	579	19	609	20	5,958	5,723
Lima-N. E. Ind.-Mich.	855	29	1,012	33	10,740	8,016
Ill.-S. W. Ind.	363	12	418	13	4,881	4,520
Mid-Continent:						
N. La. and Ark.	1,593	53	1,664	53	18,516	19,811
W. Tex.-S. E. N. Mex.	5,461	182	5,603	181	61,051	63,924
East Texas	13,360	445	15,453	499	167,805	190,982
Other (Okla., Kans., N. Tex., etc.)	25,098	837	26,212	846	290,219	280,262
Gulf Coast	7,172	239	7,493	242	75,664	69,906
Rocky Mountain	1,631	54	1,718	55	16,829	13,581
California	14,335	478	14,454	466	160,666	157,399
Total	72,463	2,415	76,776	2,477	834,335	833,499

STOCKS OF CRUDE PETROLEUM

(Thousands of barrels of 42 gallons)

	Nov. 30, 1934	Oct. 31, 1934	Nov. 30, 1933
At refineries by location:			
East Coast: Domestic	10,420	11,356	9,708
Foreign	2,346	2,092	2,052
Appalachian	1,331	1,270	1,943
Indiana, Illinois, Kentucky, Michigan	3,955	4,064	4,262
Oklahoma, Kansas and Missouri	5,822	6,093	6,174
Texas: Inland	1,968	2,081	2,448
Gulf Coast: Domestic	10,704	10,330	11,867
Foreign	311	295	24
Louisiana Gulf Coast: Domestic	3,544	3,522	3,342
Foreign	398	483	491
Arkansas and Inland Louisiana	679	847	1,022
Rocky Mountain	13,537	13,521	12,504
California	9,601	9,720	8,609
Total	64,616	65,674	64,446
At refineries by origin:			
Pennsylvania Grade	1,203	1,151	1,851
Other Appalachian (inc. Kentucky)	620	604	547
Lima-Northeast Indiana-Michigan	365	457	423
Illinois-Southwest Indiana	104	124	117
North Louisiana and Arkansas	1,785	2,090	2,602
West Texas and Southeast New Mexico	4,064	3,927	3,904
East Texas	6,586	7,871	8,324
Oklahoma, Kansas, North Texas, etc.	16,801	16,922	17,918
Gulf Coast	6,923	6,450	5,098
Rocky Mountain	13,509	13,488	12,486
California	9,601	9,720	8,609
Foreign	3,055	2,870	2,567
Total	64,616	65,674	64,466
Pipe line and tank farm:			
Pennsylvania Grade	3,824	3,805	3,861
Other Appalachian (inc. Kentucky)	530	504	793
Lima-Northeast Indiana-Michigan	963	1,073	1,240
Illinois-Southwest Indiana	11,267	11,456	11,005
North Louisiana and Arkansas	8,257	8,287	9,521
West Texas and Southeast New Mexico	25,351	25,528	28,887
East Texas	25,837	27,028	38,226
Oklahoma, Kansas, North Texas, etc.	139,249	141,523	135,470
Gulf Coast	11,860	12,359	11,619
Rocky Mountain	14,577	14,734	14,884
California	26,137	25,895	26,790
Total	267,952	272,192	282,296
Lease (producers') stocks	8,597	8,549	8,457
Total refinable crude in the United States	341,165	346,415	355,199

(Continued on Next Page)



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● Thruout 32 states, dealers and distributors who display the PURE seal sign are prepared for a banner year. They are sure of their source of supply, and of products of uniform high quality, because Pure Oil controls its own operations from oil wells to station pumps. They are sure of a ready-made demand because Pure Oil's complete line meets the needs of every customer, and is backed by a good reputation of 37 years standing.

The blue and white PURE seal will join you with over 16,000 other progressive marketers. Prospects for increased sales in 1935 are bright. Make sure, with Pure.

PURE

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Cabin Creek Jct., West Virginia
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Smith's Bluff, Texas
Toledo, Ohio
Midland, Michigan

SALES OFFICES:
Chicago, Illinois
New York, New York
Philadelphia, Pennsylvania
Pittsburgh, Pennsylvania
Trenton, New Jersey
Columbus, Ohio
Norfolk, Virginia
Atlanta, Georgia
Minneapolis, Minnesota
Des Moines, Iowa
Tulsa, Oklahoma
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PRODUCERS, REFINERS, MARKETERS OF A COMPLETE LINE OF PETROLEUM PRODUCTS

THE PURE OIL COMPANY ~ U. S. A.

RECEIPTS OF FOREIGN CRUDE PETROLEUM

(Thousands of barrels of 42 gallons)

Atlantic Seaboard:	Nov., 1934	Oct., 1934	Nov., 1933
Venezuela	2,342	1,951	1,182
Colombia	....	....	490
Mexico	192	186	424
Ecuador	....	....	80
Gulf Coast:			
Mexico	119	54	59
Venezuela	....	175	....
Total	2,653	2,366	2,235

STOCKS OF CRUDE PETROLEUM BY STATES AND BY LOCATION

(Thousands of barrels of 42 gallons)

	November 30, 1934				October 31, 1934			
	Refinery	tank farm and pipe line	Lease	Total	Refinery	tank farm and pipe line	Lease	Total
Arkansas	429	2,828	310	3,567	528	2,817	300	3,645
California	9,601	26,137	1,552	37,290	9,720	25,895	1,594	37,209
Colorado	298	110	20	428	286	102	20	408
Georgia*	658	....	....	658	455	....	....	455
Illinois	1,220	10,301	110	11,631	1,262	10,769	105	12,136
Indiana	1,091	1,747	3	2,846	1,143	1,870	8	3,021
Kansas	1,941	11,435	415	13,339	2,052	11,792	405	14,229
Kentucky†	553	407	40	1,000	524	398	40	962
Louisiana‡	4,192	6,763	450	11,406	4,324	7,173	420	11,917
Maryland	1,316	....	....	1,316	1,126	....	....	1,126
Massachusetts§	900	....	....	900	850	....	....	850
Michigan	162	522	85	769	177	634	95	906
Missouri¶	176	3,039	....	3,215	176	3,345	....	3,521
Montana	276	650	75	1,001	281	627	75	983
New Jersey	5,671	538	....	6,209	5,661	503	....	6,164
New Mexico	4	346	210	560	7	345	190	542
New York	1,026	151	17	1,194	1,047	142	17	1,206
Ohio	1,037	7,154	80	8,271	1,128	7,223	80	8,431
Oklahoma	3,705	79,772	1,700	85,177	3,885	80,542	1,660	86,087
Pennsylvania	4,345	1,909	100	6,354	5,330	1,955	100	7,385
Texas	12,983	98,378	2,920	114,281	12,706	100,214	2,920	115,840
Utah	272	....	....	272	284	....	....	284
West Virginia	73	1,926	130	2,129	79	1,869	130	2,078
Wyoming	12,687	13,791	375	26,853	12,663	13,977	390	27,030
Total United States	64,616	267,952	8,597	341,165	65,674	272,192	8,549	346,415

*Includes South Carolina and Virginia. †Includes Tennessee. ‡Includes Alabama. §Includes Rhode Island. ¶Includes Nebraska and South Dakota.

SHIPMENTS FROM CALIFORNIA TO EASTERN PORTS IN THE UNITED STATES*

(Thousands of barrels of 42 gallons)

	Nov., 1934	Oct., 1934	Nov., 1933	Jan.-Nov., 1934	Jan.-Nov., 1933
Gasoline	1,002	981	844	8,124	10,742
Natural gasoline	....	....	73	....	154
Kerosene	248	168	183	1,507	1,384
Gas oil and Diesel oil	287	79	261	1,984	1,916
Fuel oil	752	566	1,718	11,825	4,083
Lubricants	6	8	10	62	50
Asphalt	....	....	1	74	2
Miscellaneous	1	3	16	57	190
Total	2,296	1,805	3,106	23,633	18,521

*Compiled by E. T. Knudsen of the San Francisco office of the Bureau of Mines.

NUMBER OF WELLS COMPLETED IN THE UNITED STATES*

	Nov., 1934	Oct., 1934	Nov., 1933	Jan.-Nov., 1934	Jan.-Nov., 1933
Oil	1,032	1,234	983	11,513	7,163
Gas	155	171	108	1,263	842
Dry	405	480	266	3,948	3,018
Total	1,592	1,885	1,357	16,724	11,023

*From The Oil and Gas Journal and California office of the American Petroleum Institute.

RECORD OF WELLS FOR IMPORTANT FLUSH FIELDS, NOVEMBER, 1934*

	Completions: Oil	Gas	Dry	Total initial production (bbls.)	Average initial production (bbls.)	Drilling Nov. 30
Texas	521	22	189	495,500	950	907
East Texas	241	...	8	385,600	1,600	137
Gulf Coast	53	6	22	32,000	625	91
Conroe	2	...	1	2,200	735	2
Greta	3	...	...	1,200	400	4
West Texas	39	1	11	44,000	1,130	157
California	62	...	39	64,100	1,035	199
Kettleman Hills	3	...	...	10,300	3,435	26
Long Beach	4	...	11	900	225	24
Huntington Beach	5	...	2	5,200	1,040	4
Oklahoma	91	3	27	53,800	590	444
Oklahoma County	5	...	...	3,700	740	29
Pottawatomie and Seminole Counties	19	...	2	8,300	440	68
Louisiana	30	11	22	16,800	525	162
Gulf Coast	21	...	10	15,500	740	86
Rest of State	9	11	12	300	35	76
Other states	328	114	127	72,500	220	1,107
Total United States	1,032	155	405	701,700	680	2,819

*From The Oil and Gas Journal and California office of the American Petroleum Institute.

GASOLINE PRODUCTION BY THE VARIOUS METHODS, NOVEMBER, 1934

(Thousands of barrels of 42 gallons)

	Straightrun: Total	Per cent (*)	Per cent (†)	Cracked: Total	Per cent (*)	Per cent (†)	Nat. gasoline: Total	Per cent (†)	Gasoline: Total	Per cent (*)
East Coast	2,500	18.2	43.1	3,043	22.2	52.4	264	4.5	5,807	40.4
Appalachian	714	25.1	49.7	681	23.9	47.5	40	2.8	1,435	49.0
Ind., Ill., etc.	2,452	24.0	41.4	3,182	31.2	53.7	294	4.9	5,928	55.2
Okla., Kans., Mo.	2,195	28.0	45.0	1,970	25.2	40.3	718	14.7	4,883	53.3
Texas Inland	1,441	31.3	50.1	789	17.1	27.4	647	22.5	2,877	48.4
Texas Gulf	3,124	20.3	44.6	3,529	23.0	50.6	339	4.8	7,002	43.3
Louisiana Gulf	693	20.8	61.6	419	12.5	37.3	12	1.1	1,124	33.3
Ark. and La. Inland	365	24.9	50.6	309	21.1	42.9	47	6.5	721	46.0
Rocky Mountain	404	37.1	48.5	353	23.6	42.3	77	9.2	834	50.7
California	2,565	20.6	52.3	1,307	10.5	26.6	1,034	21.1	4,906	31.1
Total	16,453	22.4	46.3	15,592	21.3	43.9	3,472	9.8	35,517	43.7

*Per cent of crude run. †Per cent of total gasoline output.

SHIPMENTS OF MOTOR FUEL BY PIPE LINES

(Thousands of barrels of 42 gallons)

	Nov., 1934	Oct., 1934	Nov., 1933	Jan.-Nov., 1934	Jan.-Nov., 1933
Motor fuel turned into lines	4,079	4,226	3,866	41,922	35,009
Motor fuel delivered from lines	4,051	4,237	3,852	41,845	34,779
Shortage	3	16	14	99	82
Stocks in line and working tanks end of month	1,290	1,365	1,345	1,290	1,345

RUNS TO STILLS AND OUTPUT OF REFINERIES, NOVEMBER, 1934

(Thousands of barrels of 42 gallons)

	Crude run: Domestic	Foreign	Total	Unfinished rerun (net): Crude gasoline	Other	Natural gasoline
East Coast	11,422	2,300	13,722	—13	187	264
Appalachian	2,849	.....	2,849	—27	244	40
Ind., Ill., Ky., etc.	10,213	.....	10,213	103	—440	294
Okla., Kans., Mo.	7,832	.....	7,832	—49	51	718
Texas Inland	4,612	.....	4,612	—26	—33	647
Texas Gulf	15,344	50	15,394	—20	300	339
Louisiana Gulf	3,202	137	3,339	54	—70	12
Ark. and La. Inland	1,465	.....	1,465	—6	—29	47
Rocky Mountain	1,492	.....	1,492	—6	32	77
California	12,457	.....	12,457	—15	107	*1,039
Total	70,888	2,487	73,375	—5	349	3,477

OUTPUT—	Gasoline	Kerosene	Gas oil and distillate fuels	Residual fuel oils	Lubricants	Wax (thousands of pounds)
East Coast	5,807	879	1,485	3,781	637	18,200
Appalachian	1,435	247	207	402	424	7,280
Ind., Ill., Ky., etc.	5,928	384	1,003	1,333	186	1,400
Okla., Kans., Mo.	4,883	513	519	1,594	235	3,920
Texas Inland	2,877	228	295	1,352	30	280
Texas Gulf	7,002	1,423	1,756	4,258	360	5,040
Louisiana Gulf	1,124	417	642	807	44	1,400
Ark. and La. Inland	721	84	90	408	9	.....
Rocky Mountain	834	57	73	398	31	1,960
California	4,906	507	1,900	5,413	106	.....
Total	†35,517	4,739	7,970	19,746	2,062	39,480

OUTPUT—	Coke (tons)	Asphalt (tons)	Road oil	Still gas	Miscellaneous	Shortage
East Coast	10,800	89,400	30	724	97	99
Appalachian	1,800	10,400	.....	182	24	93
Ind., Ill., Ky., etc.	48,400	41,300	39	763	9	51
Okla., Kans., Mo.	19,400	2,500	30	364	21	268
Texas Inland	4,000	.....	30	130	12	235
Texas Gulf	16,200	10,400	12	895	21	130
Louisiana Gulf	5,400	16,000	.....	126	.....	55
Ark. and La. Inland	200	9,400	18	32	5	57
Rocky Mountain	7,000	400	40	81	2	35
California	.....	35,300	95	326	§14	128
Total	113,200	215,100	294	3,622	205	1,151

*Includes 73,000 bbls. run through pipe lines. †Includes 396,000 bbls. special naphthas. §Includes 5,000 bbls. liquefied petroleum gas made from natural gasoline.

CRACKED OPERATIONS

Fresh cracking stock charged to stills—crude 4,337,000 bbls.; other oils, 25,494,000 bbls.; gasoline produced by cracking, 15,592,000 bbls.; fuel oil produced by cracking, 14,883,000 bbls.

STOCKS HELD BY REFINING COMPANIES, NOVEMBER 30, 1934

(Thousands of barrels of 42 gallons)

	Gasoline: At refineries	Bulk and pipe lines	Total	Kerosene	Gas oil and distillate fuels	Residual fuel oils
East Coast	3,767	8,403	12,170	1,757	6,525	7,955
Appalachian	748	1,558	2,306	175	358	933
Ind., Ill., Ky., etc.	2,523	4,161	6,684	774	3,139	3,296
Okla., Kans., Mo.	2,569	1,352	3,921	671	1,227	2,425
Texas Inland	1,448	81	1,529	156	340	1,642
Texas Gulf	4,491	621	5,112	1,875	4,395	7,358
Louisiana Gulf	652	385	1,037	274	2,276	3,092
Ark. and La. Inland	231	56	287	23	147	806
Rocky Mountain	559	.....	559	132	172	410
California	8,057	2,140	10,197	1,286	5,676	63,891
Total	25,045	18,757	43,802	7,123	24,355	91,808

	Wax (thou. of lbs.): Lubricants	Crude scale	Refined	Total	Coke (tons)
East Coast	2,159	19,896	33,743	53,639	28,000
Appalachian	971	16,848	3,000	19,848	8,900
Ind., Ill., Ky., etc.	517	13,338	2,429	15,767	40,000
Okla., Kans., Mo.	499	4,084	1,049	5,133	45,800
Texas Inland	100	.....	371	371	54,200
Texas Gulf	1,510	3,211	20,161	23,372	105,700
Louisiana Gulf	111	433	1,254	1,687	2,100
Ark. and La. Inland	14	.....	.....	.....	100
Rocky Mountain	86	9,194	1,211	10,405	81,100
California	874	.....	.....	.....	92,800
Total	6,841	67,004	63,218	130,222	458,700

	Asphalt (tons)	Road oil	Miscellaneous	Unfinished oils: Crude gasoline	Other	Natural gasoline
East Coast	93,200	53	38	1,008	7,885	202
Appalachian	9,800	13	32	301	1,953	2
Ind., Ill., Ky., etc.	71,100	88	29	624	6,258	57
Okla., Kans., Mo.	10,100	126	24	492	5,069	74
Texas Inland	.....	26	13	198	1,188	16
Texas Gulf	10,700	33	35	1,278	9,980	98
Louisiana Gulf	26,500	11	.....	113	1,112	.....
Ark. and La. Inland	36,500	10	.....	54	246	6
Rocky Mountain	5,400	114	8	107	1,847	15
California	43,500	161	51	782	4,704	2,356
Total	306,800	633	230	4,957	40,242	2,825

Grand total stocks refined products 224,437,000 bbls.

Operation Agreements in the Bradford Field

BRADFORD, Pa., Jan. 12.—The Messer Oil Co., extensive operator in the Bolivar, Allentown and Duke Center areas, has acquired the Mary Breese and Sons property in fee located near Rixford. The Messer organization will operate the lease and will refund the owners one-fourth of the sale price of oil produced.

The operation-royalty agreement likely will be the basis of a number of Bradford Field deals in the near future. Oil men point out that holders of unflooded property, unable to obtain funds for extensive flooding operations, eagerly accept the proposition offered by a large producing company to install the flood and return a 25 per cent royalty to the owner on the greatly increased production. The usual method has been to guarantee a minimum monthly return to the property holder over a period of years.

The agreement also proves satisfactory to the producing companies, who are not tied down by initial payment and interest charges.

W. E. McLEOD DIES

CALGARY, Alberta, Jan. 12.—William Edward McLeod, a pioneer of Alberta oil development and president of the McLeod Oil Co., died here recently, aged 77. Associated with the late William Livingston and J. D. Pugh, he took out the first oil lease in Turner Valley, the syndicate being original owners of the lease on which the famous No. 1 Dingman discovery was later drilled. In 1923 he organized the McLeod Oil Co., of which he was president for seven years.

Caesar Field, Bee County, Extended Southwest; New Producing Horizon in West Tuleta Field

SAN ANTONIO, Tex., Jan. 14.—Extending production three-quarters of a mile southwest in the Caesar Field, Bee County, with by far the best well to be completed in the field, and the discovery of a new producing horizon in the West Tuleta Field, in the same county, were the featured developments in the Southwest Texas district during the week.

Firm Oil Co.'s No. 1 Grissom extended the producing limits of the Caesar Field southwest when it cored the Pettus sand from 3,029-41 feet and was completed for an estimated production of 700 bbls. per day. On the first gauge reported it made 88 bbls. in three hours through 2-inch open tubing. The oil is of 26 gravity, which compares to that of other producers in the field. The operators of the well hold approximately 600 acres in the vicinity of the well, with Luling Oil and Gas Co. owning practically all of the rest of the acreage within this new play.

The Caesar Field was discovered by Luling Oil & Gas Co. and the company has been doing exploration work in the area for several months, which to date has several gas producers and two small oil producers. Location of the extension producer is in the McFarly Survey, and many new locations are expected to be announced for the field within the next week.

Opens Two Producing Horizons

Heyser, Heard and Walton's No. 1 Walton, in the southwest part of the West Tuleta Field in Section 8, has apparently opened up two separate producing horizons, due to a showing made on a drill stem test, in what is thought to be the Hockleyensis sand from 3,107-37 feet, which showed 200 feet of oil and 50 pounds of pressure in 15 minutes. The sand, however, has been passed up and the well is being carried on down to the Pettus sand, which is the main producing horizon for the field, found at around 3,900 feet. The test is located nearly 2 miles southwest of Whisenant and Trenchard's No. 2-B Rapp, estimated good for 50 bbls. per day on the pump that was completed in the same sand from 3,075-90 feet. It was plugged back and completed at this depth after it failed to make a commercial well in the Pettus sand.

While the above test was making a showing in the shallow sand, two other tests were being completed in the main producing horizon of the field, one of the tests was completed by Edwin M. Jones and the other by Houston Oil Co. Edwin M. Jones' No. 5 Skinner and Harris, Section 10, an offset to the operator's No. 1 Silcock, completed last week, cored the pettus sand from 3,910-26 feet and was completed for an estimated 250 bbls. Houston Oil Co.'s No. 1 Ed Strauss, in the southwest part of the field, Section 9, topped the Pettus sand from 3,955-59 feet, the total depth, and was completed for 300 bbls. per day.

Important Wildcats

Two important wildcat tests in the county were preparing to get under way the first of the week. One mile northwest of the Holxmark gas area, Dirks Brothers' No. 1 Foley was completing a water well, and is scheduled to be spudded the first of the week. The other test is L. W. Stieren's No. 1 Fox, a north offset to Worth Oil Corp.'s No. 1 Rutledge, a wildcat north of Mineral, which showed for a possible producer on a drill stem test made in the Pettus sand at around 3,400 feet, is ready to spud as soon as casing is run in the water well..

In the McNeil Field, Live Oak County, Lion Oil & Refining Co. is completing its No. 2 McNeil, Block 9, northeast of the discovery for a gas well at 4,300 feet. It is estimated to be making 25,000,000 feet of gas daily. It was drilled to a total depth of 6,035 feet and was plugged back and completed in the same horizon found in the discovery well, which is producing from the Hockleyensis.

Three rank wildcat tests are due to be started in this county within the next few weeks. California Oil Co. has made location for a test on its large block in the eastern part of the county, near the Bee County line. The test is to be drilled in the A. A. Dunn Survey. Five miles north of Three Rivers, Berry and Haynes have made location for their No. 1 C. L. Terrell, in the Henry Survey, 3 miles south of Fant City. The other test is to be drilled by Luling Oil & Gas Co. on the Rex land, about 2 miles and a half north of Coquat and others' No. 1 Little, which is coring below 4,995 feet. Location for No. 1 Rex is in the G.H.&H. Survey, 3 miles south of Mileska, and it is being rigged up.

Frio County

In Frio County, Amerada Petroleum Corp. has made location for its fourth test to be drilled on its big fault line block. It is No. 3 Halff and Oppenheimer, located 2,100 feet southwesterly from the northwest line, and 300 feet from the northeast line of the B. J. Gillman Survey No. 16, approximately 500 feet north by 45 degrees east of its No. 2, which is making an estimated 8,000,000 to 10,000,000 feet of gas daily and showing a small amount of oil below 3,900 feet. The No. 2 Halff and Oppenheimer was drilled to a total depth of 10,050 feet, but was plugged back to its present depth after the operators had twisted off the drill stem.

A new gas area was opened up for Jim Wells County, by the completion of Smith and Storey's No. 1 Martha E. Dilworth, located 16 miles northwest of Alice, in the Stanley Welch Survey. It was completed for a dry gas well estimated at 30,000,000 feet daily after the operators had perforated the casing in sand from 2,325-37 feet. The hole was drilled to 6,115 feet, the total depth. Various upper sands were tested after casing was set at 3,735 feet. A sand in the Hockley at 4,945 feet to 4,947 feet gave promise of gas production and another sand in the Cockfield at 5,898 to 5,922 feet, which, although tight, contained both oil and gas. Due to the showings being made at these various depths, the area is expected to receive much development within the near future. It topped the Dibollensis at 5,690 feet, the Cockfield at 5,804 feet, and the Hockleyensis at 4,800 feet.

Sam Fordyce Field

In the Sam Fordyce Field, Southwestern Hidalgo County, two wells had cemented casing in saturated sand, and were to be tested the first part of the week. On the west edge of the field, Heep Oil Corp.'s No. 3 Seabury and others, cored saturated sand from 2,757 to 2,785 feet and is now waiting on cement to set. Location is in tract 256, Porcion 38. In the eastern part of the field Navarro Oil Co.'s No. 1 A. F. De Flores, Tract 275, Porcion 40, topped the sand at 2,751 feet and cored to 2,758 feet, the total depth. Seven-inch casing was cemented at 2,753 feet. In the extreme southeast part of the field, Showers and Moncrief have spudded their No. 1 C. E. Smith. Location is in Share 3-B, Porcion 41. It will be an interesting test, as it will extend production several hundred feet northwest, if it makes a producer.

The Railroad Commission has made concession to the operators in the field, that amounts to a nice increase in the daily allowable. The allowable of the field has been 750 bbls. daily with the operators permitted to market 1,250 bbls. daily for fuel oil and operating purposes in the field. The commission last week granted the operators permission to market this additional 1,250 bbls. daily through regular trade channels.

In the Marrs-Choate area, Karnes County, J. A. Thompson's No. 1 Lyons, 660 feet northeast of Norton's No. 2 Choate, in the Bass Survey, has been completed for a gasser on a three-eighths-inch choke, with 455 pounds tubing pressure and 550 pounds casing pressure. It is making about 2 bbls. of salt water. American Liberty Oil Co. has spudded in and set surface casing for its No. 1 Von Roeder, a wildcat test in the Johnson Survey.

One and a half miles south of Humble Oil & Refining Co.'s No. 1 Ruiz, which recently opened up a new producing area for Duval County, Magnolia Petroleum Co.'s No. 1 Herbst has been abandoned at 3,263 feet. On a drill stem test made from 2,768-2,775 feet, the horizon from which No. 1 Ruiz is producing, it tested only a small amount of gas. The outcome of this test apparently defines the producing limits of this new field to a rather small area. Another wildcat test for the county was marked off the list when the Texas Co. completed its No. 2 Graham, Survey 571, for a dry hole at a total depth of 5,015 feet.

Two wildcat tests in McMullen County were marked off the list as failures the past week, H. K. Boysen's No. 1 Hagist, Section 10, H.&T.C. Survey, topped the Mirando sand from 2,250-59 feet and was abandoned at 2,294 feet after it tested salt water. Wuest and Witherspoon abandoned their shallow wildcat test at 954 feet. Location is in the R. O'Boyle Survey.

Wildcat Operations in Southwest Texas

Week Ending January 12

BANDERA COUNTY

W. B. Kyle et al's No. 1 Duke, 200 ft. NW line, 150 ft. SW line of J. A. Bennett Sur. No. 7.
Moving in material.

Plateau Oil Co.'s No. 1 Garrison Sur. No. 506, 1,500 ft. from N and 2,700 ft. from E lines of Sur. (3 mi. SW of Medina).
Trying to lower csg.; T.D. 1,235 ft.

BASTROP COUNTY

G. L. Cline's No. 1 D. B. Lane 100 ac., 150 ft. N and W lines of Sandifer Sur.
Location.

Jim Harper's No. 1 Harris.
Location.

BEE COUNTY

Atkins & O'Neil's No. 1 M. Wooda, 466 ft. from N and E lines of NW Sec. 8.
Spudded.

Dirk Bros.' No. 1 Foley, N cor. of W. L. Foley tract, about 1 mile N of Simras' No. 1 Holxmark.
Drlg. wtr. well.

Arthur W. Gray's No. 1 Rutledge, 3,322 ft. from N line, 250 ft. from E line of 200-ac. tract in B. Q. Hadley Sur.
Location.

Cecil Hagan's No. 1 John R. Scott, 1¼ mi. NE of Morgan test.
S.D. 3,550 ft.

R. M. Herod's No. 5 Kimball, 310 ft. from E line, 150 ft. from N line of 110-ac. tract in S. Winship Sur.
Derrick; comp.; wtr. well.

Mid-Continent Crude Oil Co.'s No. 3 Kimball (Grayburg area).
T.D. 3,555 ft.; P.B. to 3,300 ft.; S.D.

Morgan et al's No. 1 Demroy, 1 mile N of Morgan's No. 1 Hicks.
Dry and abd. 5,050 ft.

Southwest Exploration Co.'s No. 1 Heyden & Bruckham, center of farm tract in Uranga grant.
Rigging up.

L. W. Stieren's No. 1 Fox, N offset to Worth's No. 1 Rutledge.
Rigging up.

R. J. Worthington et al's No. 1 Rutledge, 1,000 ft. from N line and 200 ft. from E line of A. Hadley Sur.
T.D. 3,434 ft.; washing down over twisted drill pipe.

BEXAR COUNTY

Bender and Krister's No. 1 Evans, 1,200 ft. W line, 200 ft. N line of 313.7-ac. tract in Dela Garza Sur.
Drlg. 1,450 ft.

Campbell's No. 1 Cantu, offsetting Meador's No. 1 Cantu, 150 ft. S line, Arocha Sur. No. 15.
Rigging up.

N. G. Carter's No. 1 Ruiz, western part of county; (work over).
T.D. 1,710 ft.; standing.

C. A. Ingersoll's No. 1 Mann, S of Von Ormy in Rolen Sur.
Moving in.

Jones & Kieffer's No. 1 LaGrane, NW cor. of tract, 210 ft. each way, F. Rolen Sur.
Drlg. 500 ft.

Geo. O'Neill et al's No. 1 Salek Cherniarsky, E of Eckert Field.
Drlg. 1,175 ft.

Duke Phillips' No. 1 Anna Lieck, 400 ft. S Seguin Road, 12 miles E of San Antonio.
Drlg. 530 ft.

R. Y. Walker's No. 1 L. A. Hamilton, 550 ft. SE and NW cor. 1,110 ft. NE of NW line of tract, Blk. 4,007.
T.D. 1,601 ft.; abd.

BROOKS COUNTY

Helmrich & Payne's No. 1 Scott and Hooper, Palo Alto y Guerra grant.
Spudded and set surface csg.

CALDWELL COUNTY

O. Dawn's No. 1 F. Tiller, 250 ft. from N line, 1,000 ft. from E line of 37-ac. tract, in G. Hinds Sur.
T.D. 2,485 ft.; pumping; no gauge.

Kurz Oil Co.'s No. 1 Kurz ranch fee, 4,000 ft. SW line, 4,300 ft. SE line of Barnard Kiecamp Sur.
S.D. 4,106 ft.

F. Meyers' No. 1 Mooney, 260 ft. from road, 330 ft. from middle of SE cor. of 103-ac. tract, Seale Sur.
Spudded and S.D.

Stanley Smith's No. 1 J. C. Copeland, about 4 miles SW of Lockhart and beyond the Mebana Estate.
Setting up machinery.

DUVAL COUNTY

Buffalo-Texas Syndicate's No. 1 Escobas, 2,777 ft. from N line, 1,944 ft. from W line of 930-ac. tract in San Francisco grant.
Tested mud 3,462 ft.

Eckert-Peacock et al's No. 1 C. W. Sutherland, 330 ft. N and W lines of SW NE of Sur. 188.
Drlg. 1,500 ft.

Grimes et al's No. 1 Fitzsimmons, 300 ft. S line and 150 ft. E line, Sur. 291.
S.D. 1,100 ft.

Humble O. & R. Co.'s No. 1 Mucio Vela, 330 ft. S and E lines of N½ of Sec. 42, T.T. Ry. Sur.
Rigging up.

W. C. McBride's No. 2 Hagist, skidded rig from No. 1.
Drlg. 1,700 ft.

Texas Co.'s No. 2 Graham, 990 ft. SE line, 1,650 ft. SW line of Sur. 571.
Abd. 5,015 ft.

E. R. Thomas' No. 1 Parr, Sec. 26.
Drlg. below surface csg.

EDWARDS COUNTY

Will Olhausen's No. 1-B Turney, 660 ft. from W line, 1,422 ft. from N line, Sec. 176, C.C.S.D.&R.G.N.G. Sur.
S.D.320 ft.

(Continued on Page 47)

Daily Average Production

Daily average production for the week ending January 5:

SAN ANTONIO DISTRICT

Field and county—	Dly. av.
Darst Creek, Guadalupe	9,105
Hilbig, Bastrop	1,271
Luling, Caldwell	5,302
Salt Flat (Brunner), Caldwell	4,397
Other pools	3,981
Total San Antonio district	23,956

LAREDO DISTRICT

Cole, Webb-Duval	1,654
Escobas, Zapata	1,921
Government Wells, Duval	19,753
Sam Fordyce, Hidalgo	2,007
Other pools	6,107
Total Laredo district	31,442
Total San Antonio district	23,956
Total Southwest Texas district	55,398

Reeves County Wildcat Is to Be Drilled Deeper; New Test to Be Started in Sterling County

By L. E. BREDBERG
Fort Worth Bureau, The Oil and Gas Journal

FORT WORTH, Tex., Jan. 14.—There were only 8 locations staked in the Permian Basin during the week, and 15 tests reported on the completion list, 4 of which were wildcats. Only one wildcat location was reported, Dobbs and others staking this location in Block 3 of the William Allen Survey, on the Friend Ranch, 3 or 4 miles south of the town of Big Lake in Reagan County.

J. E. Cunningham's wildcat on the Altman (Tillar) ranch, in Section 1, C. C. Wyatt Survey, northern Reeves County, that caused considerable excitement last week when it struck an estimated 10,000,000 feet of gas at 3,673 feet in brown dolomite, above the Delaware lime, killed the gas and is now drilling bridge at 2,443 feet. Total depth is 3,673 feet. It is to be carried deeper, and because of other good gas and oil showings having been logged in other wildcats in this county, none of which made commercial producers, this test and the gas showing did not retain the interest shown. However, several major companies have taken some acreage in the vicinity.

Sterling County Test

Ferndale Drilling Co. is to drill a 3,200-foot test, unless commercial production is found at a lsser depth, or sulphur water is struck, for the Derby Petroleum Co., Merry Brothers and Perini and John I. Moore, in Section 20, Block 30, W.&N.W. Survey, near the Glasscock County line, 17 miles northwest of Sterling City, in Sterling County. It is to be spudded on or before January 24.

McCullouch County

Operators are preparing to drill other tests in the area in which White Brothers have just completed a 20-bbl. 37 gravity oil well at total depth of 670 feet after oil was struck at 666 feet while drilling for water. This well is in Section 2, M. Dewey Survey, McCulloch County, 5½ miles west of Mercury, and about 20 miles northeast of Brady, where the oil is being trucked to the Carson Refining Co.'s plant. Several tests are proposed to be drilled 5 or 6 miles south of the discovery, and a short distance across the Colorado River to the north in Coleman County, a Fort Worth operator is planning to drill a couple of tests.

There is other production in McCulloch Cpunty, but this is the first wildcat to be struck in several years, in the county. Due to the shallow depth at which the oil is found, and the high gravity, the area should be enticing. Companies may not be interested due to the wells being of small caliber.

Andrews County

It begins to look as if the southeastern limits of the Means Pool, in northeast Andrews County, has been located. Humble Oil & Refining Co.'s No. 2 Means, Section 11, Block A-35, approximately 2 miles southeast of the nearest producer, showed some salt water on a drill stem test, although a Schlumberger test previously did not show any water from 4,450 to 4,520 feet. It has been bottomed at 4,520 feet where pipe was cemented, but drilling has been resumed to drill the plug.

Ector County

The Penn Pool, Ector County, was extended a half mile southwest this week by Shell Petroleum Corp.'s No. 1 Connell, in the C SE NE Section 12, Block 16. It picked up the first showing of oil at 3,444 feet, with increases at 3,503-12 feet and 3,553-61 feet. It was bottomed at 3,664 feet and shot with 443 quarts from 3,444-64 feet. During the first 13 hours after the shot, it flowed 158 bbls. It is still cleaning out preparing to complete at this depth.

Winkler County

The Sayre or Howe area, Winkler County, gained its fourth producer when Mid-Continent Petroleum Corp. completed No. 1 Howe, north offset to the discovery well, flowing 230 bbls. in 12 hours through a twenty-two-sixty-fourths inch choke on casing. The first showing of oil and gas was logged at 2,708-45 feet, with increases logged at deeper intervals. Total depth is 2,940 feet. It is in Section 12, Block 26. There are no other interesting tests in this or the Halley area, to the south at present, although several are drilling and are due for close attention within two or three weeks. Jeffries, Fox and Butler's No. 1 Brown and Aultman, in Section 6, Block B-5, 1½ miles south of Kermit, on the trend between the Halley and Howe discoveries, is still fishing, making small heads every time the fishing tools are pulled out. Total depth is 3,095 feet.

Ordovician Test

Gulf Production Co. has started drilling again on its Ordovician test on the extreme west edge of Upton County, in the McElroy Field, Section 197, Block F. The test swabbed over 40 bbls. of high gravity oil and nine times as much salt water in swabbing down to 9,000 feet, and before starting up drilling. It is below 10,983 feet.

Humble Oil & Refining Co. is to drill the test in northeast Upton County, in Section 4, Block M, Gulf Production Co. and others donating acreage for carrying it to the Ordovician lime. Location is a short distance to the north of the trend lying between the Ordovician producers in the Big Lake Field, Reagan County, to the southeast, and Gulf Production Co.'s deep test in Upton County, to the northwest, consequently will be of great interest.

Glasscock County

Currie and others abandoned another wildcat in southeastern Glasscock County during the week. This test, in Section 10, Block 35, Township 4s, T.&P. Survey, was given up at a total depth of 3,508 feet. This makes the last of a quartet of failures drilled in this part of the county within four or five months. None picked up any showings of oil and gas to create an incentive for further drilling.

Howard County

Iron Mountain Oil Co.'s No. 1 Reed, in Section 46, Block 30, Township 1n, T.&P. Survey, a three-quarter mile northeast extension to the Dodge-Denman area, eastern Howard County, still appears as a puny producer. It was completed at a total depth of 2,827 feet, swabbing 75 bbls. of oil per day, after shooting with 790 quarts from 2,630-2,827 feet. Top of the pay was logged at 2,645 feet. It appears as possibly limiting this comparatively new field on the northeast, although some independents are planning to drill about 2 miles distant.

WICHITA FALLS DISTRICT

Locations in the Wichita Falls district increased to 46 during the week. There were 24 producers completed and 14 tests given up as dry. One of the best wells completed in Young County in a long time was Pitzer and West's and Simms Oil Co.'s No. 1 Gardner, in Section 614, T.E.&L. Survey, in the north extension to the James deep lime pool, north of Graham and in the north central part of the county. The well, bottomed at 3,955 feet, was treated by the chemical company owned by Pitzer and West, who hold two-thirds ownership in the well and the 1,820-acre block surrounding it. After treating and during the test, the well flowed 170 bbls. of 38 gravity oil in one hour. It had to be shut in until more storage could be erected.

Deep Oil Development Co. has abandoned No. 1-A Wilson, in Block 118, A. T.N.C.L. Survey, Archer County, at a total depth of 3,648 feet. Another deep test in this county, being drilled by W. B. Hamilton of Wichita Falls, is north of Anarene, on the Gidding estate in the A. McMillan Survey. It was shot from 5,147-67 feet and is preparing to test. Total depth is 5,259 feet.

Texas Co. has made location for No. 7 Les K. Johnson, in the field owned by the company on the extreme west edge of Foard County, 500 feet from the south line and 1,650 feet from the west line of the NW Section 35, Block L, S.P.R.R. Survey.

Pipe line runs from the district averaged 63,845 bbls. per day during the week.

PANHANDLE DISTRICT

Magnolia Petroleum Co.'s No. 1 Jones, an old well in Section 170, Block 3, T. &N.O. Survey, Moore County, drilled into a deeper pay horizon in the dolomite at 3,404-06 feet, and flowed 130 bbls. in an hour, with 5,000,000 feet of gas. This increased production has riveted attention on the Sunray Pool and other drilling is to be started immediately, the same company already having made location for a west offset. Companies can be expected to carry on a drilling campaign in this area in an effort to pick up greater production in wells which have slumped to but a few barrels per day, or are standing idle. This well was completed in 1931 at 3,376 feet, and was producing around 70 bbls. per day before deepening and picking up this new pay.

United States Oil Corp., with offices in Oklahoma City, has made location for a rank wildcat in Section 212, Block 43, H.&T.C. Survey, on a 100,000-acre block in Ochiltree, and has rigged up rotary. It is scheduled to go to 6,500 feet unless commercial production is found.

Humble Oil & Refining Co., which just abandoned a deep test in Section 27, Block 9, H.&G.N. Survey, Childress County, at a total depth of 5,225 feet, has made location for another test on the same lands, Smith Land & Cattle Co. ranch, about 1½ miles to the south, in Section 14, Block 9. Rig and equipment will be moved from the first location.

Production in the Panhandle Field averaged 57,410 bbls. per day during the

(Continued on Page 45)

Wildcat Operations in West Texas

Week Ended January 11

ANDREWS COUNTY

Fuhrman Pet. Corp.'s No. 2-B Boner, 440 ft. from N and 1,320 ft. from E, Sec. 25, Blk. A-43.
Drlg. 1,035 ft.

Humble Oil & Ref. Co.'s No. 2 Means, 660 ft. from N and 1,980 ft. from W, Sec. 11, Blk. A-35.
T.D. 4,510 ft.; D.S.T. showed 300 ft. salt water 4,500-20 ft.

Humble Oil & Ref. Co.'s No. 3 Means, 1,980 ft. from S and 3,300 ft. from W, Sec. 4, Blk. C-45.
Drlg. 2,570 ft.

Humble Oil & Ref. Co.'s No. 3 Means, 660 ft. from N and 1,997 ft. from E, Sec. 9, Blk. A135.
Rig.

Stogner et al's No. 1 Richardson, 1,980 ft. N and 660 ft. E, Sec. 4, Blk. A-37, P.S.L.
Standard tools.

York & Harper's No. 1 Hereford Stock Farms, C Labour 12, League 315, Parmer Co. School Lands.
T.D. 620 ft.; underreaming csg.

BREWSTER COUNTY

Joiner et al's No. 1 McIntyre, 353 ft. from S, 2,390 ft. from E of Sec. 21, Blk. 352, W. M. Mitchell Sur.
S.D. 2,100 ft.; rigged up.

King & Franklin's No. 1 Gage Est., C Sec. 133, Blk. 22, G.H.&S.A. Sur.
S.D. 575 ft.

S. G. Smith's No. 1 Decie, 2,490 ft. from S and E, Sec. 7, Blk. 1.
Drlg. 346 ft.

COCHRAN COUNTY

Kelsey's No. 1 Slaughter, C Labour 36, League 150, R.C.S. Lands.
Location.

West Texas Development Co.'s No. 1 Slaughter, near C of Labour 53, League 149, Randall Co. School Lands.
Derrick.

CRANE COUNTY

Strauss' No. 1 Phelps et al, 2,113 ft. from N and 713 ft. from NW Sec. 13, Blk. 31, E.&T.C. Sur.
Drlg. 1,874 ft.

Gulf Prod. Co.'s No. 1 Waddell, C NW NW Sec. 4, Blk. B-27, P.S.L. Sur.
Drlg. 670 ft.

Gulf Prod. Co.'s No. 9 Waddell, C of NE, Sec. 11, Blk. B-28, P.S.L. Sur.
Location.

Wahlenmaier Pet. Corp.'s No. 1 Kloh, 330 ft. from S and 1,608 ft. from W, Sec. 32, Blk. 43, Twp. 4s, T.&P. Sur.
Rigged up.

CROCKETT COUNTY

Leslie-Hiller et al's No. 1 Todd, 1,200 ft. N and 330 ft. E, Sec. 26, Blk. WX, G.C.& S.F. Sur.
Drlg. 566 ft.

Humble Oil & Ref. Co.'s No. 1 Couch, C NW Sec. 3, Blk. QR, G.C.&S.F. Sur.
Drlg. 985 ft.

CULBERSON COUNTY

Anderson-Pritchard Oil Corp., Magnolia Pet. Co. et al's No. 1 Borders, 1,255 ft. N and 2,305 ft. from W, Sec. 34, Blk. 69, P.S.L. Sur.
Straightening crooked hole 445 ft.

Miller Bros.' No. 1 fee, 1,900 ft. from N and 660 ft. from E line of Sec. 21, Blk. 97, P.S.L. Sur.
S.D. 2,145 ft.; show oil 2,107 ft.

Wood et al's No. 1 Hall, 250 ft. from S and 35 ft. from E, Sec. 11, Blk. 54½, 16 miles N of Van Horn, P.S.L. Sur.
S.D. 246 ft.

DAWSON COUNTY

Adams & Turner's No. 1 John Robinson, 1,320 ft. from N line, 1,320 ft. from W line of Sec. 46, Blk. M, E.L.R.R. Sur.
S.D. 3,300 ft.

ECTOR COUNTY

Amerada Pet. Co. et al's No. 1 Holt, 1,980 ft. from S and E, Sec. 20, Blk. A.
T.D. 4,040 ft.

Atlantic Oil Prod. Co.'s No. 1 T. P. Land Trust, 440 ft. from N and W of SE Sec. 11, Blk. 43, Twp. 1s, T.&P. Sur.
T.D. 1,448 ft.; underreaming.

G. Farley's No. 1 Connell, 990 ft. from S and 330 ft. from E, Sec. 11, Blk. B-16, P.S.L. Sur.
Material.

Gulf Prod. Co.'s No. 1 Goldsmith, C of NW, Sec. 19, Blk. 44, Twp. 1s, T.&P. Sur.
Rig.

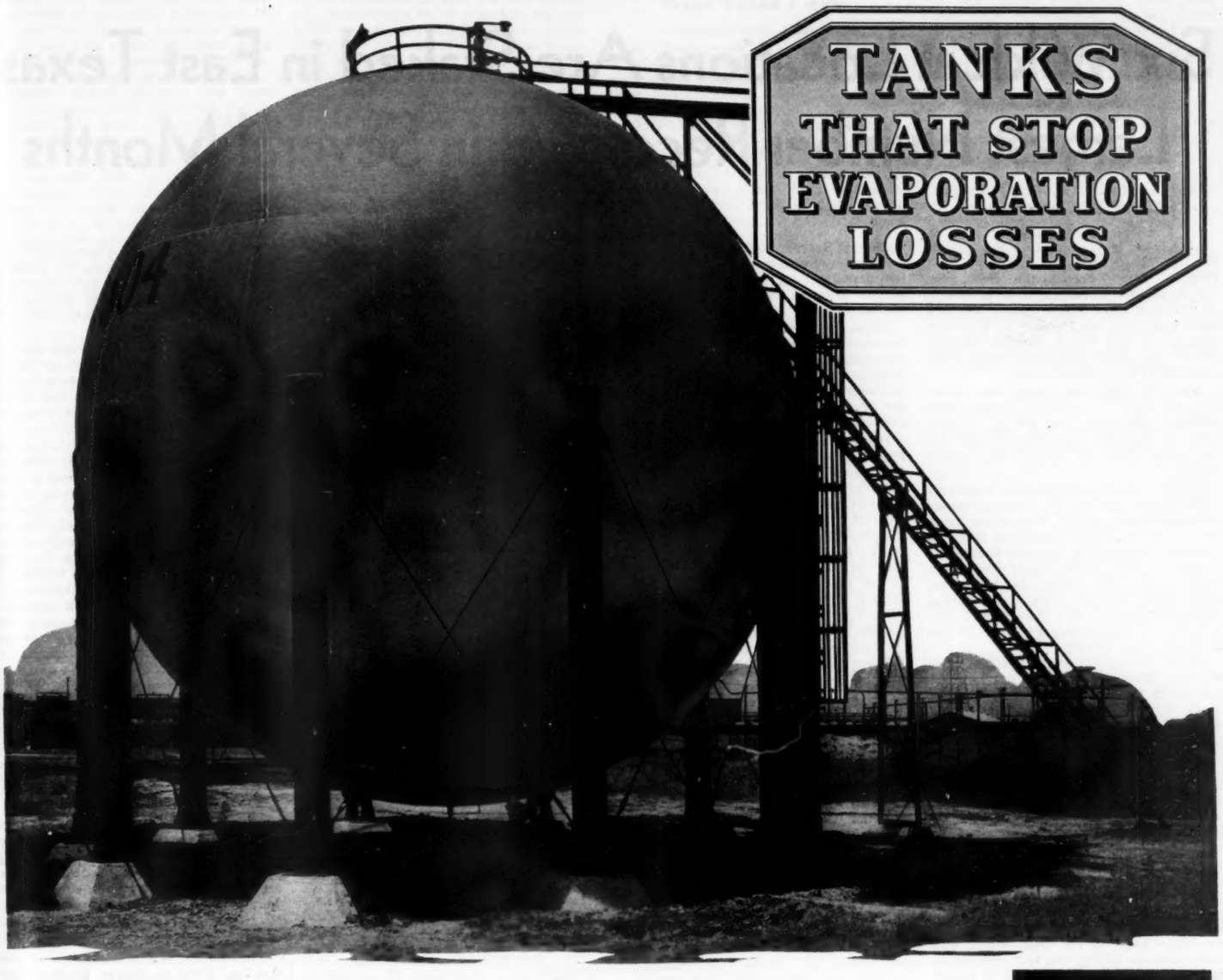
Harrison et al's No. 3 Addis, 1,650 ft. from N line and 2,200 ft. from W line of Sec. 35, Blk. 43, Twp. 2s, T.&P. Sur.
T.D. 4,051 ft.; flowed 150 bbls. day, while drilling.

International Pet. Corp.'s No. 1 Cowden, 660 ft. from S and E, Sec. 25, Blk. 44, Twp. 2s, T.&P. Sur.
Rigged up standard tools.

Landreth Prod. Co.'s No. 1 Johnson, 440 ft. from N and W, Sec. 47, Blk. 43, Twp. 1s, T.&P. Sur.
T.D. 4,180 ft.; plugged back to 4,166 ft.; shot 180 qts. from 4,088-4,158 ft.; C.O.

Landreth Prod. Co.'s No. 1 Clarence Scherbauer, 660 ft. from S and E lines of Sec. 20, Blk. 44, Twp. 1n, T.&P. Sur.

(Continued on Page 46)



THE HORTONSPHERE
for 20 lb. pressure and up

THE Hortonsphere stops evaporation loss from light oil products by permitting an internal pressure to be built up, instead of venting vapor out into the air.

Boiling—the most serious type of evaporation loss—occurs in open tanks when the vapor pressure of the liquid exceeds atmospheric pressure. In a closed container, the vapor pressure built up by rising temperature is opposed by an equal gas pressure in the space above the liquid surface. Therefore, no boiling of a volatile product can occur in a Hortonsphere as long as the vapor pressure of the liquid does not exceed the absolute pressure for which the relief valve is set, that is, atmospheric pressure plus gauge pressure.

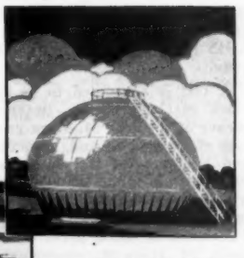
The Hortonsphere obviously stops breathing losses because air is not drawn in and forced out through the valves daily except in rare cases when the pressure exceeds the setting of the relief valve.

It also stops most of the filling losses—after the first filling—for vapor forms as the Hortonsphere is emptied and condenses as it is filled, tending to keep the pressure constant.

The Hortonsphere is the most economical type of container for liquids which require pressures of 20 lbs. per sq. in. or greater.

Our nearest office will be glad to send you cost estimating data covering Hortonspheres or any other type of tanks without obligation to you.

THE HORTONSPHEROID



THE WIGGINS PONTOON ROOF

THE WIGGINS BREATHER ROOF

CHICAGO BRIDGE & IRON WORKS

DALLAS	1241 Dallas Athletic Club Bldg.	CHICAGO	2128 Old Colony Building	PHILADELPHIA	1615-1700 Walnut St. Bldg.
HOUSTON	2919 Main Street	DETROIT	1514 Lafayette Building	BOSTON	1517 Consolidated Gas Building
TULSA	1606 Thompson Building	CLEVELAND	2204 Rockefeller Building	SAN FRANCISCO	1054 Rialto Building
BIRMINGHAM	1536 North Fiftieth Street	NEW YORK	3147 - 165 Broadway Building	LOS ANGELES	1423 Wm. Fox Building

Fabricating Plants in BIRMINGHAM, CHICAGO and GREENVILLE, PA.

Six Wildcat Locations Are Staked in East Texas; Largest Number Recorded in Several Months

By L. E. BREDBERG

DALLAS, Tex., Jan. 14.—Six wildcat locations were staked in East and East Central Texas during the week, the largest number in several months. Rowan and Nichols have rigged up for a test 1 mile northwest of Reklaw in Cherokee County, in the C. M. Brewer Survey, where they have assembled about 5,000 acres after geophysical work.

Amerada Petroleum Corp. has staked location 382 feet southwest of the most westerly producing well in the Cayuga area of northeast Anderson County, on the Burk farm in the E. G. Rector Survey.

Humble Oil & Refining Co. is to drill a Woodbine sand test 2½ miles northeast of Mount Calm in Hill County, on lands owned by the Citizens National Bank of Denison, in the N. T. Roberts Survey.

Syam Oil Co., which drilled several dry holes in Navarro during the past year, is to make another stab at Woodbine sand production in this county, with No. 1 Love, in the southeast corner of the J. L. Strother Survey.

Wood County is to get another wildcat test; Bryant and Spear has location for No. 1 Consumer Lignite Co., in the most westerly northeast corner of the F. McMahon Survey, southeast of Alba.

Anderson County

Gulf Production Co., which is drilling at 5,945 feet in hard formation, in its Davey and Royall test, in the M. Rogers Survey, 7 miles southeast of Palestine, Anderson County, has made location for another test about 1 mile to the south. Location is 200 feet out of the southwest corner of the F. M. Delaney 14-acre tract in the Phillip Martin Survey. No. 1 Davy and Royall will probably be plugged back and completed as a gasser to obtain gas for other tests in the area, which was considered as having the best chances in the district for making a field. It struck an estimated 50,000,000 feet of gas at 5,045 feet, but showed no oil of consequence.

A test is scheduled to be drilled on a block east of Slocum, in the southeast corner of the Jose M. Mora grant, 2 miles east of Denson Spring, Anderson County, and another test is contemplated in the Summerfield area of Cherokee County, which Fogelson and others are expected to drill.

A block of 4,000 acres has been taken south of Bagwell, centering in the J. Calloway Survey, Red River County, for a Woodbine sand test, and a block of 6,000 acres starting at the southern limits of the town of Nacogdoches in Nacogdoches, is to be given a 4,500-foot test.

Three miles south of the Van Field, tentative location has been made for a Woodbine sand test on the D. A. Easley tract in the J. Evans Survey on a block of 3,000 acres. There have been a number of dry holes drilled between this location and the Van Field.

Parson and others' No. 1 Southern Pine Lumber Co., in the Thompson Survey, Cherokee County, topped the Austin chalk at 5,025 feet and is drilling at 5,035 feet. It is 9 miles southwest of the town of Alto.

Turbeville and others' No. 1 Ivy, in the F. B. Hardy Survey, 7 miles southeast of Fairfield, Freestone County, topped the Austin at 4,120 feet and is drilling at 4,320 feet.

Byrd & Frost, Inc.'s No. 1 Pittsburg National Bank, in the John Parker Survey, topped the Georgetown lime at 3,976 feet and is shut down. It will probably be abandoned.

EAST TEXAS FIELD

A recent check of bottom hole pressure in the East Texas Field by a group of major company engineers shows an increase of 10 pounds for the month of December, raising the average weighted pressure to 1,231 pounds. This increase is attributed to close curtailment, production having fallen from an estimated 130,000 or 140,000 bbls. per day since October 25. Since December 10, when the commission's tender order went into effect, overproduction was further curtailed, all of which has had its effect on bottom hole pressures. Production is now being held to around the daily allowable set by the commission, and if it continues to hold at this level, pressures are expected to show another gain in January.

There were 55 wells completed in the field during the week, 4 pumpers and 1 a "swabber." One test, drilled by Humble Oil & Refining Co. on the J. M. Adams tract in Gregg County, was abandoned at a total depth of 3,507 feet.

Operators and companies are both reaching out on the east flank, extending production in several spots along this edge. A test drilled to the northeast of the first dry hole drilled in the Joiner area, Rusk County, has proved a producer, and other producers have been drilled east of dry holes, proving that careful drilling was not adhered to in sinking the first tests on the east edge. A good many acres are expected to be proven along the eastern flank, with operators seeking acreage, and trying to sublease acreage from those who might not drill their leases farther to the east. The field now covers 116,590 acres.

There were 74 locations staked in the field during the week. Many exception permits are being granted for drilling many unnecessary wells, especially in the townsites.

Shipments

Refined products shipments from the field declined again this week, falling 41 cars under the previous week's total. This week's shipments follow:

	Cars	Gallons
Gasoline	270	2,189,100
Casinghead gasoline	107	924,400
Fuel oil	102	968,980
Residuum	59	492,865
Distillate	47	384,820
Gas oil	40	325,605
Crude oil	15	142,055
Kerosene	25	205,630
Topped crude	8	67,525
Total	673	

Of the above cars shipped, 236 went out under federal tenders, 434 went out under state tenders, 257 were transported for coastwise shipping, 233 for interstate movement and 183 intrastate. Only three cars went out untendered.

Prior to October 25 several hundred cars were billed out each week as "topped crude." In reality, it was generally crude oil, shipped under this fictitious billing. The Railroad Commission is now stopping the practice.

Gasoline, casinghead gasoline and fuel oil shipments decreased materially during the week, the former slumping by 39 cars, casinghead gas decreasing by 34 cars and fuel oil from 130 to 102 cars. Crude oil shipments increased from 2 last week to 15 this week, while gas oil increased from 14 to 40 cars. No naphtha was shipped this week, whereas 12 cars went out the previous week.

Shipments for January 10 showed a total of 124 cars moved, a small daily average gain. The shipments for this day ran as follows:

	Cars	Gallons
Gasoline	41	332,530
Fuel oil	14	135,770
Casinghead gasoline	18	151,740
Gas oil	17	141,315
Residuum	11	91,055
Kerosene	6	48,575
Topped crude	8	73,320
Distillate	1	8,035
Crude oil	8	67,245
Total	124	

This day's shipments does not necessarily mean that the present week's shipments will run far above last week's. Only six cars were shipped out without tenders, proof that the products moved were practically all legally produced and refined.

Van Field

Pure Oil Co., which transports oil from the Van Field to Smiths Bluff through the Pure-Van Pipe Line Co., adjusted its price on Van crude effective today, to meet the North Texas, Central Texas and East Central Texas group postings, instead of adhering to Oklahoma-Kansas postings, as in the past. There are two classes of crude produced in the Van area, a low gravity oil of around 30 degrees, found in the shallow wells to the north of the field, and the regular Woodbine sand oil testing around 35 degrees found in the main part of the field. The shallow oil has been bringing 88 cents and will henceforth only be listed at 83 cents, whereas the regular Van crude is to be cut from 98 and 96 cents to 93 and 91 cents, or 5 cents per barrel less than either grades have been listed. This is merely an adjustment in the postings and is not to be construed as a reflection upon the market.

The Humble Pipe Line Co. is the only other purchaser in the field, and as yet has not posted any changes in its prices.

A. J. Muller, executive assistant to the superintendent of the Humble Pipe Line Company, Longview, Texas.

East Central Texas Wildcats

Week Ending January 12

ANDERSON COUNTY

Gulf Prod. Co.'s No. 1 Dovey & Royall, 330 ft. from NE and NW of 172-ac. tract, M. Rogers Sur.
Coring 5,810 ft.

J. W. Luttes' No. 1 C. McKee, 2,640 ft. from N line of lease and survey and 330 ft. from W line of McKey 800-ac. tract.
Derrick.

Tide Water Oil Co. et al's No. 21-A Wells, 4,079 ft. N and 2,333 ft. W of lease, S. Edmondson Sur. (Trinity test).
Derrick.

BOWIE COUNTY

Tex-Ark. Oil Co.'s No. 1 Hamilton Estate, 600 ft. E and 350 ft. N lines, J. Milan Sur., 4 miles S of Red River.
Rigged up.

CHEROKEE COUNTY

J. B. Daniels' No. 1 Southern Pine Lbr. Co., 4,000 ft. N and 150 ft. W of SE cor. of Thompson Sur.
Drlg. 4,320 ft.; top Pecan 4,165 ft.

Jacksonville O. & G. Co.'s No. 1 H. D. Henderson, 660 ft. from N and W lines of 40-ac. tract out of Tankersley 104-ac. tract, 5 miles NE of Jacksonville on W side of railroad, J. Pineda Sur.
T.D. 752 ft.

Rowan-Nichols Oil Co.'s No. 1 Gilbreath, 460 ft. N and 2,600 ft. from W lines of C. M. Brewer Sur., 1 mile NW of Reklaw.
Rigged up.

E. M. Thomason et al's No. 1 Addis Estate, 350 ft. S of survey and 150 ft. E of railroad, J. T. Jones Sur., 6 miles NW Alto.
S.D. 2,150 ft.

Wilson Stubbs Oil Co.'s No. 1 Rowborts, 450 ft. from S line, 150 ft. from W line of 100-ac. tract, 2 miles SW of Jacksonville, J. D. Wolfin Sur.
Fishing 1,552 ft.

ELLIS COUNTY

Beckner-Finley et al's No. 1 Coker, 2,900 varas along S line of grant from river and 1,700 varas N at R/A, R. De La Pena Sur.
S.D. 527 ft.

FREESTONE COUNTY

Amerada Pet. Corp.'s No. 1 Burk, 951 ft. S and 191 ft. W of river, E. G. Rector Sur. Location.

Burris' No. 1 R. J. Johnson, NE cor. of a 95.5-ac. tract, W. M. C. Jones Sur.
S.D. 1,000 ft.

Hailey-Young's No. 1 Cochran, 400 ft. N and W lines, D. Bullock Sur., 1 mile SE of Lima.
Location.

Tuberville et al's No. 1 Ivy, 2,004 ft. S and 606 ft. E of F. B. Hardy Sur., 7 miles SE of Fairfield.
Top Pecan 3,022 ft.; drlg. 3,110 ft.

GREGG COUNTY

O. T. Clark's No. 1 Williams, 2,100 ft. from S and 2,400 ft. from W of D. Hill Sur., 3 miles NE of Longview.
Drlg. 2,875 ft.

HENDERSON COUNTY

Campbell and Chamberlain's No. 1 R. Ansley, 1,724 ft. W and 300 ft. S of SE cor. of M. Matthews Sur., N. H. T. Thompson Sur.
S.D. 894 ft.

Crosby and Pulp's No. 1 M. T. Dobbs, NW cor. of east Dobbs 100-ac. tract, 4 miles E of Malahoff and S of Railroad, George Aldrick Sur.
S.D. 4,048 ft.; (S.L.M.).

HILL COUNTY

Humble O. & R. Co.'s No. 1 Citizen National Bank of Denison, 2,070 ft. W and 525 ft. S of N. T. Roberts Sur., 2½ miles NE of Mount Calm.
Rigged up.

HOPKINS COUNTY

D. A. Hale et al's No. 1 L. M. Hall, 200 ft. from N and E lines of 70-ac. tract, 1 mile SE of Miller Bros. A. Caro Sur.
S.D. 1,485 ft.

HUNT COUNTY

Cauble & Thompson's No. 1 Reed, 330 ft. N of northerly NE cor. of C. B. Payne Sur., but in F. Thweatt Sur., 3 miles SE of Greenville.
Drlg. 510 ft.

G. S. & S. Co.'s No. 1 O. Popper.
Fishing 2,865 ft.

KAUFMAN COUNTY

W. J. Lewis et al's No. 1 D. Clark, 430 ft. from S line and 600 ft. from E line of Sur., 6½ miles NW of Elmo.
S.D. 1,726 ft.

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EAST TEXAS COMPLETIONS

Gregg County

George L. Culver's No. 1 R. M. Wood, top sand 3,643 feet, total depth 3,650 feet, initial production 75 bbls. per hour. G. L. Gillespie (receiver for Blackstone, F. & M. Oil Co. and K. C. Moser), No. B-d Blackstone, top sand 3,574 feet, total depth 3,610 feet, initial production 85 bbls. in 30 minutes on three-quarter-inch choke. Gulf Production Co.'s No. 35 Shepherd, top sand 3,481 feet, total depth 3,505 feet, initial production 60 bbls. per hour. Humble Oil & Refining Co.'s No. 7 J. M. Adams, top sand (none), top Georgetown lime 3,502 feet, total 3,507 feet, dry and abandoned; No. 18

Lawrence, top sand 3,598 feet, total depth 3,629 feet, initial production 60 bbls. per hour. Lee & Burnett's No. 2 J. Bell, top sand 3,582 feet, total depth 3,590 feet, initial production 40 bbls. per hour. McLemore and others' No. 1 Gladewater School District, top sand 3,620 feet, total depth 3,650 feet, initial production 140 bbls. per hour through 1-inch choke.

Roeser & Pendleton's No. 7 Sheffield, top sand 3,615 feet, total depth 3,640 feet, initial production 24 bbls. in 24 minutes on 2-inch tubing. Shell Petroleum Co.'s No. 12 Aiken, top sand 3,582-3,647 feet, total depth 3,657 feet in shale, initial production 30 bbls. in 30 minutes. Sinclair-Prairie's No. 9 York, top sand 3,591 feet, total depth 3,605 feet, initial production 25 bbls. in 15 minutes. Standard of Kansas's No. 4 Fuller, top sand 3,653-65 feet, total depth 3,670 feet in shale, initial production 30 bbls. in 27 minutes. Stroube & Stroube's No. 5 Bumpus, top sand 3,489 feet, total depth 3,505 feet, initial production 45 bbls. in 30 minutes. Yount-Lee's No. 8-C Lathrop, top sand 3,610-13 feet, total depth 3,619 feet in shale, initial production 50 bbls. per hour through eleven-sixteenths-inch choke; No. 7-A M. Smith, top sand 3,536 feet, total depth 3,556 feet, initial production 60 bbls. per hour through eleven-sixteenths-inch choke.

Gulf Production Co.'s No. 35 C. Brown, top sand 3,560 feet, total depth 3,585 feet, initial production 66 bbls. per hour through three-quarter-inch choke. Iotex Co.'s No. 3 J. A. Knowles, top sand 3,609 feet, total depth 3,621 feet, initial production 20 bbls. in 20 minutes. Reserve Development Co.'s No. B-a Blackman, top sand 3,591 feet, total depth 3,605 feet, initial production 45 bbls. in 30 minutes. Shell Petroleum Co.'s No. 10-A J. Douglas, top sand 3,614 feet, total depth 3,625 feet, initial production 35 bbls. in 30 minutes; No. 11-A J. Douglas, top sand 3,593 feet, total depth 3,603 feet, initial production 44 bbls. in 30 minutes. Sun Oil Co.'s No. 34 M. T. Cole, top sand 3,528 feet, total depth 3,550 feet, initial production 65 bbls. per hour. Texas Co.'s No. 10 Dickson, top sand 3,614 feet, total depth 3,645 feet, initial production 60 bbls. per hour. Tide Water Oil Co.'s No. 11 W. D. Lacy, top sand 3,545-63 feet, total depth 3,563 feet, initial production 12 bbls. in 10 minutes.

Rusk County

Humble Oil & Refining Co.'s No. 149 Crim, top sand 3,702 feet, total depth 3,720 feet, initial production 92 bbls. per hour; No. 156 Crim, top sand 3,604 feet, total depth 3,660 feet, initial production 102 bbls. per hour. Jackson and others' No. 3 M. E. Williams (was No. 2), top sand 3,702 feet, total depth 3,704 feet, initial production 80 bbls. per hour through 2½-inch tubing. Robert Bros.' No. 2-B C. E. Christian, top sand 3,648 feet, total depth 3,654 feet, initial production 25 bbls. in 15 minutes through 2-inch tubing. Tide Water Oil Co.'s No. 13-A J. S. Bean, top sand 3,601-52 feet, total depth 3,660 feet in shale, initial production 10 bbls. in 10 minutes. Wheelock & Collins' No. 13 D. Wells, top sand 3,695 feet, total depth 3,714 feet, initial production 50 bbls. per hour through one-half inch choke.

Bateman Oil & Gas Co.'s No. 1 W. H. Worrell, top sand 3,592 feet, total depth 3,640 feet, initial production 40 bbls. in two hours pumping. G.B.R. Oil Co.'s No. 8 L. Harmon, top sand 3,755 feet, total depth 3,844 feet, initial production 96 bbls. per hour. Great States Oil Co.'s No. 1 M. Smith (Taylor), top sand 3,585 feet, total depth 3,640 feet, initial production 20 bbls. in four hours pumping. Humble Oil & Refining Co.'s No. 8 Wilson-Nauls, top sand 3,534-40 feet, total depth 3,648 feet, initial production 19 bbls. per hour; No. 19 Thompson, 3,672 feet, total depth 3,702 feet, initial production 74 bbls. per hour. Imperator Oil Co.'s No. 4 Cox, top pay 3,634 feet, total depth 3,716 feet, initial production 40 bbls. per hour.

Jenkins Corp.'s No. 18 Jobe, top pay 3,565 feet, total depth 3,664 feet, initial production 20 bbls. per hour pumping, McMurray's No. 3 Redwine, top pay 3,530 feet, total depth 3,707 feet, initial production 20 bbls. in four hours swabbing. Marathon Oil Co.'s No. 19 Moore, top pay 3,608, total depth 3,683 feet, initial production 54 bbls. per hour. Octo Oil Co.'s No. 3 Pinkton, top pay 3,540 feet, total depth 3,620 feet, initial production 28 bbls. in two hours pumping. Sonbar Oil Co.'s No. 9 Finney, top pay 3,643 feet, total depth 3,709 feet, initial production 42 bbls. per hour. Stewart Holdings' No. 3 Giles, top pay 3,691 feet, total depth 3,719 feet, initial production 60 bbls. per hour.

Stroube & Stroube's No. 4 Griffin, top pay 3,649 feet, total depth 3,682 feet, initial production 20 bbls. in 20 minutes. Thomason Holdings' No. 4 Thompson, top pay 3,725 feet, total depth 3,735 feet, initial production 60 bbls. per hour. Tide Water Oil Co.'s No. 15 Pinkston, top pay 3,772 feet, total depth 3,812 feet, initial production 35 bbls. in 25 minutes. Wise-Jackson's No. 1 Maxwell, Jr., top pay 3,756 feet, total depth 3,772 feet, initial production 32 bbls. in 25 minutes.

Smith County

Reeves (receiver for Big Indian), No. 6 Worford, top pay 3,719 feet, total depth 3,690 feet, initial production 75 bbls. per hour. Cockburn-Boase's No. 10 Green, top pay 3,758 feet, total depth 3,760 feet, initial production 40 bbls. per hour. Gulf Production Co.'s No. 10 Wiley, top pay 3,691 feet, total depth 3,705 feet, initial production 75 bbls. per hour through three-quarter-inch choke.

Magnolia Petroleum Co.'s No. 2 Tyiska, top pay 3,764 feet, total depth 3,766 feet, initial production 9 bbls. in five minutes. Manahan's No. 6 Cook, top pay 3,752 feet, total depth 3,755 feet, initial production 40 bbls. in 15 minutes through 1-inch choke. Sells Petroleum Co.'s No. 2 St. Clair, top pay 3,769 feet, total depth 3,770 feet, initial production 10 bbls. in 10 minutes through 1-inch choke. Smith County Oil & Gas Co.'s No. 7 Cook, top pay 3,742 feet, total depth 3,743 feet, initial production 50 bbls. in 30 minutes. Texokana Oil Co.'s No. 5 Wright, top pay 3,683 feet, total depth 3,685 feet, initial production 40 bbls. in 20 minutes.

Upshur County

E. & D. Oil Co.'s No. 6 Wells, top pay 3,685 feet, total depth 3,707 feet, initial production 15 bbls. in 15 minutes. Gulf Production Co.'s No. 5 Ray, location abandoned. Pewitt's No. 1-B Sanders, top pay 3,641 feet, total depth 3,646 feet, initial production 75 bbls. per hour. Slemp's No. 3 Tuttle, top pay 3,691 feet, total depth 3,713 feet, initial production 40 bbls. per hour. Thibodeaux Oil Co.'s No. 6 Sanders, top pay 3,666 feet, total depth 3,682 feet, initial production 60 bbls. per hour.

West Texas Fields

(Continued from Page 42)

week. There were 15 tests completed, all producing but 2. Seventeen locations were staked in the district, all but two being field locations.

COMPLETIONS IN PANHANDLE

Carson County

McGill's No. 1 Cooper, top pay 3,030 feet, total depth 3,058 feet, shot with 250 quarts from 3,005-58 feet, initial production 314 bbls. per day, pumping.

Childress County

Humble Oil & Refining Co.'s No. 1 Smith Land & Cattle Co., dry and abandoned at 5,225 feet.

Gray County

Claude Drilling Co.'s No. 3 Byrum, top pay 3,136 feet, total depth 3,258 feet, shot with 570 quarts from 3,085-3,258 feet, initial production 240 bbls. per day, pumping. Continental Oil Co.'s No. 7 Carrie and Wright, top pay 2,855 feet, total depth 2,910 feet, initial production 1,275 bbls. per day on gas lift. Tom Doswell's No. 1 White, dry and abandoned 3,385 feet. Kewanee Oil & Gas Co.'s No. 2-D Morse, top pay 2,490 feet, total depth 2,598 feet, shot with 360 quarts from 2,490-2,598 feet, initial production 162 bbls. per day, pumping. King Royalty Co.'s No. 2 Brown, top pay 3,214 feet, total depth 3,246 feet, shot with 300 quarts from 3,163-3,241 feet, initial production 313 bbls. per day, pumping. Sulloch Oil Co.'s No. 3 Morse, top pay 2,497 feet, total depth 2,587 feet, shot with 360 quarts from 2,499-2,583 feet, initial production 269 bbls. per day, pumping. Texas Co.'s No. 4 Short, top pay 2,895 feet, total depth 2,935 feet, shot with 210 quarts from 2,825-2,935 feet, initial production 226 bbls. per day, pumping; No. 3 Webb, top pay 2,555 feet, total depth 2,650 feet, shot with 180 quarts from 2,500-80 feet, initial production 49 bbls. per day, pumping.

Hutchinson County

Ainsman and others' No. 1 Moore and Langdon, top pay 2,995 feet, total depth 3,100 feet, shot with 450 quarts from 2,995-3,090 feet, initial production 334 bbls. per day, pumping.

Moore County

Phillips Petroleum Co. and others' No. 2 Wilson, total depth 8,012 feet, plugged back to 3,191 feet, shot with 200 quarts from 3,135-75 feet, initial production 22,200,000 feet of gas.

Wheeler County

Skelly Oil Co.'s No. 11 Derrick, top pay 2,378 feet, total depth 2,506 feet, initial production 145 bbls. per day, pumping. Smith Brothers' No. 5 Harland, top pay 2,520 feet, total depth 2,538 feet, initial production 1,196 bbls. Texas Co.'s No. 5 Keller, top pay 2,434 feet, total depth 2,530 feet, initial production 117 bbls. per day, pumping.

COMPLETIONS IN WEST TEXAS

Edwards County

Carter and others' No. 1 Meirs, dry and abandoned 634 feet.

Fisher County

General Crude Oil Co.'s No. 4 Young, dry and abandoned 3,130 feet.

Glasscock County

Currie and others' No. 1 Currie, dry and abandoned 3,508 feet. Continental Oil Co.'s No. 3 Gilbreath, top pay 2,318 feet, total depth 2,522 feet, initial production 331 bbls. day, pumping. World Oil Co.'s No. 3-C McDowell, top pay 2,401 feet, total depth 2,403 feet, initial production 66 bbls. day, pumping.

Howard County

Irion Mountain Oil Co.'s No. 1 Reed, top pay 2,645 feet, total depth 2,827 feet, shot 790 quarts from 2,630-2,827 feet, initial production 75 bbls. day, swabbing. Illinois Oil Co.'s No. 2-B Davis, top pay 2,410 feet, total depth 2,800 feet, shot 600 quarts from 2,410-2,600 feet, initial production 360 bbls. day, pumping

McCulloch County

G. R. and W. N. White's No. 1 fee, top pay 666 feet, total depth 670 feet, initial production 25 bbls. day, flowing.

Pecos County

Stanolind Oil & Gas Co.'s No. 9-B Tippett, top pay 433 feet, total depth 510 feet, initial production 440 bbls., pumping. Cardinal Oil Co.'s No. 26-E Tippett, top pay 461 feet, total depth 464 feet, initial production 20 bbls. day, pumping; No. 5-D Tippett, top pay 495 feet, total depth 497 feet, initial production 200 bbls. day, pumping.

Runnels County

H. W. Lane's No. 1 Logan, abandoned location. Golden Petroleum Co.'s No. 6 McMillan, top pay 2,502 feet, total depth 2,527 feet, initial production 110 bbls. day, swabbing.

Schleicher County

Humble Oil & Refining Co.'s No. 1 Honig, dry and abandoned 6,472 feet, elevation 2,276 feet.

Ward County

Tex-Mex Petroleum Co.'s No. 3 California-Archenhold, total depth 3,045 feet, shot 120 quarts from 3,008-40 feet, initial production 396 bbls. day, pumping.

COMPLETIONS IN WICHITA FALLS

Archer County

Bollins' No. 22-A Perkins and others, top pay 1,391 feet, total depth 1,403 feet, initial production 15 bbls. Burns' No. 5 Harris, dry and abandoned 1,411 feet. Coker's No. 2 White, top pay 606 feet, total depth 623 feet, initial production 6 bbls. Deep Oil Development Co.'s No. 1-A Wilson, dry and abandoned 3,648 feet. Fain & McGaha's No. 24 Green, top pay 1,183 feet, total depth 1,200 feet, initial production 75 bbls. Hamilton's No. 14 Cartwright, top pay 1,129 feet, total depth 1,143 feet, initial production 150 bbls.; No. 15 Cartwright, dry and abandoned 1,242 feet; No. 23 Coffield, dry and abandoned 1,210 feet; No. 15 Ikard, top pay 1,135 feet, total depth 1,145 feet, initial production 191 bbls.; No. 16 Ikard, top pay 1,134 feet, total depth 1,145 feet, initial production 85 bbls.

Lindsey Oil Co.'s No. 3 Wilson, dry and abandoned 2,228 feet. Mitchell and others' No. 1 Turbeville, dry and abandoned 1,070 feet. Perkins & Cullum's No. 8 Abercrombie, top pay 996 feet, total depth 1,016 feet, initial production 30 bbls.; No. 9 Abercrombie, top pay 995 feet, total depth 1,001 feet, initial production 25 bbls.; No. 126 Falls County, top pay 1,118 feet, total depth 1,124 feet, initial production 10 bbls.; No. 127 Falls

Ed Neath, scout for the Humble Pipe Line Company, Longview; and G. L. Shoemaker, scout for the Shell Pipe Line Company, Tyler, Texas.

County, top pay 1,130 feet, total depth 1,151 feet, initial production 70 bbls. Petroleum Producers Co.'s No. 10 Harmonson, dry and abandoned 975 feet; No. 3-C Richardson, top pay 1,250 feet, total depth 1,265 feet, initial production 120 bbls. Regal Oil Co.'s No. 1 Richardson, top pay 1,395 feet, total depth 1,409 feet, initial production 15 bbls. Staniforth and Ray's No. 14 Wilson, top pay 1,607 feet, total depth 1,611 feet, initial production 120 bbls. Texas Co.'s No. 2-H Turbeville, dry and abandoned 1,551 feet.

Clay County

Taylor and Waggoner's No. 1 Myers, abandoned location. Toler and Hayner's No. 1 Dunn, dry and abandoned 2,096 feet.

Cooke County

Texas Co.'s No. 2 Trubenbach, top pay 1,215 feet, total depth 1,258 feet, initial production 900 bbls.

Montague County

Beck's No. 10 Davenport, top pay 1,656 feet, total depth 1,669 feet, initial production 600 bbls. Texas Co.'s No. 3 O'Neal, top pay 1,700 feet, total depth 1,709 feet, initial production 350 bbls.

Wichita County

Golding and Cochran's No. 9-C Waggoner, dry and abandoned 1,550 feet; No. 1-C Waggoner Brothers, dry and abandoned 1,875 feet. A. B. Wharton, Jr.'s No. 1-B Waggoner, top pay 1,976 feet, total depth 1,987 feet, initial production 10 bbls. per hour. Bonner's No. 16 Allen and Kemp, top pay 1,630 feet, total depth 1,645 feet, initial production 9 bbls. oil and 4 bbls. water. Burns and Long's No. 10-D Allen and Kemp, top pay 446 feet, total depth 470 feet, initial production 12 bbls. Dixon's No. 1 Harmel, dry and abandoned 750 feet.

Wilbarger County

Lido Oil Co.'s No. 9 Waggoner, top pay 2,015 feet, total depth 2,033 feet, initial production 3 bbls.

Young County

Alcorn's No. 1 Perkins, top pay 735 feet, total depth 740 feet, initial production 40 bbls. Beavers' No. 1 Stewart, dry and abandoned 923 feet. Brazelton Brothers and others' No. 4 Ward, top pay 600 feet, total depth 609 feet, initial production 35 bbls. Rathke Oil Co.'s No. 4 Graham, top pay 910 feet, total depth 917 feet, initial production 75 bbls. Sams and Kirbecker's No. 1 Prideaux Brothers, top pay 558 feet, total depth 580 feet, initial production 8 bbls.

Refined Market Firmer in the Chicago District

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seems to be at least a possibility something will be done about it.

Kerosene

Kerosene continues fairly steady and in reasonably good call, on a firm price basis. Supplies of the material are not overly large at present, with farm demand described as fair.

Heating Oils

All the better grades of heating oils have been mostly firm and steady except for a few days when it appeared the bottom might fall out of the whole market after the Supreme Court decision. At present the tone is good and demand reported from distributors is reaching good totals at this time. Prices are about unchanged.

Heavy Products

A little better call for the heavy fuels and gas oils is being reported. Most sellers are taking a stronger view of these products except for some cases in the immediate Chicago vicinity. The steadiness of crude is keeping large contracts for fuel on a strong basis for the coming year.

Lubricants

The tone in lubricants is somewhat better than recently and there are predictions that some improvement in price can be expected if crude maintains its stability.

Naphthas

Solvents and naphthas have been subject to continuing interest from buyers. The demand for rubber solvents in particular has shown a good volume. Prices all around for the general list hold unchanged.

Wax

Wax is quiet, prices unchanged. Demand for better grades holds up well.

Coke

Coke is quiet, with a firm undertone. Demand is still running at good levels, as a seasonal situation.

Administrator's Report on Crude Oil Stocks

Stocks of domestic and foreign crude petroleum in the custody of companies holding 100,000 bbls. or more totaled 322,173,000 bbls. on January 5, 1935. In comparison with data of the previous week, this total represented a net decrease of 89,000 bbls. and comprised a decline of 207,000 bbls. in domestic crude stocks and an increase of 118,000 bbls. in foreign crude stocks.

Current reports of the industry indicate that crude oil production declined from a daily average of about 2,488,000 bbls. for the week ended December 29 to an average of about 2,424,000 bbls. for the week ended January 5. Daily average imports were 64,000 bbls., a decrease of 50,000 bbls. from the average of the previous week. Daily average crude runs to stills, which had been increasing steadily since about December 1, declined to 2,450,000 bbls., or about 150,000 bbls. below the average of the previous week. The estimated daily average balance of crude oil for the week ended January 5 was as follows (barrels): Production, 2,424,000; imports, 64,000; decrease in stocks, 13,000, equals runs to stills, 2,450,000; exports, fuel and losses, 51,000.

STOCKS OF CRUDE PETROLEUM, DECEMBER 29, 1934, AND JANUARY 5, 1935
(Barrels of 42 gallons)

Grade of crude oil—	Dec. 29, 1934	Jan. 5, 1935
Pennsylvania Grade	4,468,000	4,470,000
Other Appalachian	978,000	988,000
Lima-N. E. Indiana-Michigan	1,151,000	1,165,000
Illinois-S. W. Indiana	11,454,000	11,411,000
N. Louisiana and Arkansas	9,781,000	9,797,000
W. Tex. and S. E. New Mexico	30,095,000	30,252,000
East Texas	29,698,000	29,808,000
Other Mid-Continent	150,927,000	149,747,000
Gulf Coast	18,282,000	18,510,000
Rocky Mountain	27,430,000	27,443,000
California	34,679,000	35,145,000
Domestic crude	318,943,000	318,736,000
Foreign crude	3,319,000	3,437,000
Total*	322,262,000	322,173,000

*Represents approximately 98 per cent of total stocks in the United States, exclusive of producers' stocks.

Advance in Refined Oil Prices on Atlantic Coast

(Continued from Page 23)

material available at 6 cents. The No. 1 furnace oil is quoted over a price range of 5¾ cents to 6 cents with Nos. 2, 3, and 4, 4¾ cents. The warm weather has slowed up the demand for furnace oils over the past week.

The demand for industrial fuel oils is fair and the same situation applies to the bunker grade for the marine trade. Diesel oil to the marine trade is quoted at $1.89 per barrel.

Steam refined stocks and bright stocks continue to be classed as weak products with paraffin base neutrals strong. The demand for lighter motor oils especially for the winter months appears to have definitely restricted the market for both Pennsylvania and western bright stocks. Certain Pennsylvania refiners are now considering the construction of solvent extraction plants for the purpose of reducing the viscosities of stocks now being made into regular bright stocks to secure lighter oils for compounding finished motor oils. These operators have a greater demand than they can supply for the 200-3 neutrals for compounding but have trouble finding outlets for the high viscosity bright stocks.

ROCKY MOUNTAIN RUNS

Estimated daily average production for the week ending January 12 follows:

WYOMING

	Bbls.
Salt Creek	17,870
Big Muddy	1,780
Badger Basin	40
Byron	450
Dallas Derby	810
Dutton Creek	80
Elk Basin	590
Ferris	10
Frannie	920
Garland	40
Grass Creek	1,530
Greybull	10
Hamilton Dome	680
Hudson	290
LaBarge	1,100
Lance Creek	670
Lost Soldier	2,130
Mule Creek	130
Midway	70
Notches	Shut in
Oregon Basin	3,350
Osage	730
Pilot Butte	30
Rock River	1,540
South Casper	500
Poison Spider	200
Teapot	10
Total Wyoming	35,560

MONTANA

*Buckley-Border	280
Cat Creek	660
Cut Bank	5,000
Dry Creek	100
Kevin-Sunburst	5,050
Lake Basin	40
Pondera	1,120
Total Montana	12,250

COLORADO

Florence	280
Fort Collins and Wellington	480
Iles Dome	2,640
Moffat	360
Orchard	80
Rangely	90
Tow Creek	150
Total Colorado	4,080

NEW MEXICO

Artesia	620
Cooper area	1,750
Eunice area	3,800
Hobbs	33,480
Hogback	200
Hospah	Shut in
Jal	3,210
Lea area	1,520
Maljamar	2,360
Rattlesnake	740
Table Mesa	90
Total New Mexico	47,770
Total Rocky Mountain region	96,660

West Texas Wildcats

(Continued from Page 42)

T.D. 4,236 ft.; plugged back to 4,136 ft.; S.D.

Phillips Pet. Co.'s No. 1 Scharbauer, 990 ft. from S and 330 ft. from E, Sec. 16, Blk. B-15. Derrick.

Shell Pet. Corp.'s No. 1 Connell, 1,980 ft. from N and 660 ft. from E, Sec. 12, Blk. B-16, P.S.L. Sur. T.D. 3,660 ft.; hole full oil; to shoot.

EDWARDS COUNTY

Harry Adams' No. 1 Holman, 1,650 ft. from N and 330 ft. from E, Sec. 22, C.C.S.D. &R.G.N.G. Sur. Show oil 520-25 ft.; T.D. 602 ft.; trying to pull pipe.

EL PASO COUNTY

Mesa Oil Co.'s No. 1 Coronado Valley. S.D. 1,415 ft.

FISHER COUNTY

Merry Bros. and Perrini's No. 1 Howard. 1,320 ft. from N and 660 ft. from E, Sec. 136, Blk. 2, H.&T.C. Sur. T.D. 2,905 ft.; underreaming csg.

Roesser & Pendleton's No. 2 Hill, 2,310 ft. from N and 330 ft. from E, Sec. 203, B.B.B.&C. Sur. Drlg. 2,153 ft.

GLASSCOCK COUNTY

John I. Moore et al's No. 1 J. S. McDowell, 1,980 ft. from N line and 660 ft. from E line of Sec. 22, Blk. 34, Twp. 2s, T.&P. Sur. S.D. 3,501 ft.

HOWARD COUNTY

Slagel's No. 1 Foster, 990 ft. from S and 330 ft. from W, Sec. 43, Blk. 29. Shut down.

JEFF DAVIS COUNTY

C. M. Joiner's No. 1 Jones & Coffield, 770 ft. from N and 1,322 ft. from E, Sec. 8, Blk. 3, H.&T.C. Sur. Standard tools.

JONES COUNTY

Campbell et al's No. 1 Enevill, 1,400 ft. from N and 270 ft. from W, Sec. 2, M.E.&P. Sur., ½ mile S of Anson. T.D. 1,777 ft.; underreaming csg.

Byram et al's No. 1 McWright, 200 ft. from N and 660 ft. from W of SW Sec. 5, Blk. 15, Twp. 1s, T.&P. Sur. Drlg. 1,786 ft.

Dr. C. E. Johnson's No. 1 Young, 1,800 ft. from N and 750 ft. from W of SE 290 acres of B. Travenio Sur. Shut down.

McKenzie & Bland's No. 1 First Nat'l Bank of Anson, 200 ft. from S and E, Sec. 53, D.&S.A. Sur. Spudded.

Owen et al's No. 1 Johnson & Dunwoody, 3,750 ft. from S and 330 ft. from W, Sec. 6, Blk. 17, T.&P. Sur. Cellar.

Richards et al's No. 1 Ransom, 200 ft. from N and E, Sec. 244, B. M. Clopton Sur. S.D. 750 ft.

Bill Rhodes' No. 1 Wood, 300 ft. from S and E, Sec. 2, Blk. 2, T.&N.O. Sur. Material.

Southern Oil Co.'s No. 2 Cade, 330 ft. S and 990 ft. E in Sec. 17, Blk. 19, T.P. Sur. Drlg. 2,502 ft.

Texas Inland Oil Co.'s No. 1-A Sayles, 85 ft. W and 160 ft. N of NW cor. of Lot 1, but in Lot 7, Blk. 20, T.&P. Sur. Drlg. 150 ft.

LOVING COUNTY

California Co.'s No. 5-A Allen, 1,320 ft. from NE and 2,310 ft. from SE Sec. 90, Blk. 1. Drlg. 4,285 ft.

D. C. Evans' No. 1 W. D. Johnson, 2,310 ft. from N and 1,650 ft. from W, Sec. 12, Blk. 57, Twp. 1, T.&P. Sur. S.D. 2,030 ft.; sulphur water.

LYNN COUNTY

Hart Oil Co.'s No. 1 Edwards, 220 ft. from N and 200 ft. from W of SE Sec. 29, L.&S.V. Sur. S.D. 103 ft.

McCULLOCH COUNTY

G. R. White's No. 1 White, C of NE, Sec. 2, M. Dewey Sur. T.P. 666 ft.; T.D. 670 ft.; flowing 25 bbls. day 37 gravity oil.

MARTIN COUNTY

Wright & Scott's No. 1 Flannigan, 330 ft. N and E, Sec. 22, Blk. 37, Twp. 1s, T.&P. Sur. Spudded and S.D.

MITCHELL COUNTY

Harry Adams' No. 1 Mackey, 1,980 ft. from N and 660 ft. from W, Sec. 13, Blk. 29, Twp. 1n, T.&P. Sur. T.D. 563 ft.; ran 10-in. csg.

Sawtell & Grueber's No. 1 Morrison Drlg. 720 ft.

PECOS COUNTY

Gulf Prod. Co.'s No. 3 White & Baker, SE cor. of N half Sec. 4, Block 207, T.C. Ry. Sur. T.D. 1,826 ft.; T.P. 1,825 ft.; pumped and flowed 27½ bbls. in 24 hrs.

C. S. Messenger's No. 2 Rand Jones, 1,935 ft. from S line and 1,013 ft. from W line of Sec. 5, Blk. 9, H.&G.N. Sur. Fishing 2,447 ft.

Messenger's No. 1 Dr. Sibley, 4,930 ft. from S and 990 ft. from W, Sec. 6, Blk. 9, H.&G.N. Sur. Location.

Shell Pet. Corp.'s No. 1-F Bower-University, 980 ft. from N and 660 ft. from W, Sec. 32, Blk. 16. Set csg. 1,618 ft.

Shell Pet. Corp.'s No. 1-A Carlson-University, 660 ft. from N and E, Sec. 36, Blk. 16, C.O. 900 ft.

Trans-Tex. Oil Co.'s No. 1 Caldwell, 330 ft. from E line and 330 ft. from S line of Sec. 27, Blk. 40, Twp. 9, T.&P. Sur. S.D. 1,301 ft.

REAGAN COUNTY

Dobbs' No. 1 Friend, 2,310 ft. from S and 660 ft. from W of Blk. 3, Wm. Allen Sur., 3 or 4 miles S of Big Lake. Material.

Skelly Oil Co. et al's No. 4-D H. S. Grayson, 1,980 ft. from N line and 660 ft. from W line of Sec. 33, Blk. 8, University Land Sur. Fishing 9,120 ft.

REEVES COUNTY

J. E. Cunningham's No. 1 Altman, 2,310 ft. from N line and 1,980 ft. from E line of Sec. 1, C. C. Wyatt Sur. T.D. 3,673 ft.; gas killed; drlg. bridge 2,443 ft.

Herbert Oil Co.'s No. 1 Williams & Walker, 5,280 ft. from S and 1,320 ft. from E, Sec. 17, Blk. 6, H.&G.N. Sur. Material.

RUNNELS COUNTY

Dennis et al's No. 1 Wash, 550 ft. from N and 560 ft. from E of W half, Sec. 122, E.T.R.R. Sur. Spudded and S.D.

Melrose Oil Co.'s No. 1 L. P. Woods, 150 ft. from NE lines and 3,475 ft. from W line of survey, Willett Holmes Sur. No. 100. S.D. 2,507 ft.

R. Wells' No. 1 James, 396 ft. from N and 330 ft. from E of James tract in Sec. 16, D. Diaz Sur. S.D. 1,100 ft.

SCHLEICHER COUNTY

John M. Cooper et al's No. 1 Bert Page, 1,290 ft. from N line, 1,470 ft. from W line of Sec. 40, Blk. L, G.H.&S.A. Sur. S.O. 5,923-30 ft. and 5,949-52 ft.; T.D. 5,987 ft.; to test.

W. C. Proctor et al's No. 1 Judkins & Spencer, 1,920 ft. from S and W of W. W. Russell grant. Rigged up; standard tools.

SCURRY COUNTY

Coffield & Guthrie's No. 1 Holliday, 2,310 ft. from N and 330 ft. from W, Sec. 129, Blk. 97, H.&T.C. Sur. Show oil 2,065 ft.; fishing bit 2,960 ft.

McLaughlin's No. 1 Allen, 1,331 ft. from N and 1,338 ft. from E, Sec. 298, Blk. 97. S.D. 485 ft.

STERLING COUNTY

Merry Bros. & Perrini's No. 1 Standaberry, 1,980 ft. from N and E, Sec. 26, Blk. 38, W.&N.W. Sur. Material.

STONEWALL COUNTY

Merry Bros. and Perrini et al's No. 1 Williams, C SW of SW Sec. 6, Blk. C, A.B. &M. Sur. S.D. 2,000 ft.

SUTTON COUNTY

Texs et al's No. 1 Mower, 1,980 ft. from S and W of Sec. 39, Blk. 5, T.W.&N.G. Sur. S.D. 2,285 ft.

TAYLOR COUNTY

Dunnigan Bros. et al's No. 3 Hunter, 225 ft. from S and 750 ft. from W, Sub. 14, Willis Sur.
T.D. 2,298 ft.; underreaming csg.

TERRELL COUNTY

W. A. Sudderth's No. 1 Phelps, 2,157 ft. from N line and 2,482 ft. from the W line of Sec. 5, Blk. 4-A, G. W. Turley Sur.
T.D. 5,635 ft.

UPTON COUNTY

Gulf Prod. Co.'s No. 103 McElroy, 1,980 ft. from S and 660 ft. from W, Sec. 197, Blk. F, C.C.S.D.&R.G.N.G. Sur.
Drlg. 10,984 ft.
Humble Oil & Ref. Co.'s No. 1 Pollock, C of NW, Sec. 4, Blk. M.
Location.
King Mountain Pet. Co.'s No. 1 Sherk, 330 ft. from S and W, Sec. 29, Blk. 1, M.K.&T. Sur.
S.D. 800 ft.
Williams & Williams Drlg. Co.'s No. 1 Robbins, 1,600 ft. from S and 1,900 ft. from E, Sec. 4, G.C.&S.F. Sur.
S.D. 2,040 ft.

WARD COUNTY

Alexander's No. 1 Richter, 1,650 ft. from NW, 1,170 ft. from NE line of Sec. 27, Blk. 34, H.&T.C. Sur.
S.D. 1,700 ft.
Bradford et al's No. 1 E. R. Allen, 660 ft. from NW line and 551 ft. from NE line, Sec. 11, H.&T.C. Sur.
S.D. 760 ft.
Caprito's No. 1 Hardage & Wilson, 2,310 ft. from NE and 990 ft. from SE, Sec. 11, Blk. 34, H.&T.C. Sur.
Location.
Cook Drlg. Co.'s No. 1 Wood, 330 ft. from NW and SW, Sec. 5, W. F. Stewart Sur.
T.D. 2,548 ft.
Gulf Prod. Co.'s No. 52 O'Brien.
Drlg. by tools 2,702 ft.
Gulf Prod. Co.'s No. 53 O'Brien.
S.D. 2,768 ft.
Postellio & Caprito's No. 1 Purcell, 330 ft from NE and 990 ft. from NW, Sec. 17, Blk. 34, H.&T.C. Sur.
S.D. 2,775 ft.
Rector Oil Co.'s No. 1 Monroe, 660 ft. from SE and NE, Sec. 2, Blk. 1, W.&N.W. Sur
Drlg. 1,200 ft.
Sageland Oil Corp.'s No. 2 Pure-Bennett 1,650 ft. from NW and 2,310 ft. from SW Sec. 16, Blk. 34, H.&T.C. Sur.
Spudded and S.D.
West Texas O. & R. Co.'s No. 1-C University, 330 ft. from N and E, Sec. 6, Blk. 16.
Driving csg. 465 ft.

WINKLER COUNTY

Gulf Prod. Co.'s No. 1 Wight, 330 ft. from S and E, Sec. 20, Blk. 40, P.S.L. Sur.
Drlg. 850 ft.
Harry Adams' No. 2 Scarborough, 990 ft. from N line and 990 ft. from W line, Sec. 2, Blk. 77, P.S.L. Sur.
Location.
Jeffries et al's No. 1 Brown & Altman, 2,310 ft. from S and W. Sec. 6, Blk. B-5.
T.D. 3,098 ft.; fishing; flows by heads.
Dr. Jeffries et al's No. 1 Underwood, 330 ft. from S and 2,310 ft. from E, Sec. 26, Blk. B-3.
S.D. 800 ft.
J. C. Maxwell's No. 1 Clapp, 2,310 ft. from N and 330 ft. from E, Sec. 27, Blk. 26, P.S.L. Sur.
Drlg. 3,002 ft.
Maxwell's No. 1 Daugherty.
Drlg. 2,287 ft.
R. S. Mathews et al's No. 1 Evans, 1,320 ft. from N line and 1,320 ft. from W line, Sec. 46, Blk. 73, P.S.L. Sur.
S.D. 110 ft.
Mid-Continent Pet. Corp.'s No. 1 Howe, 2,310 ft. from N and 330 ft. from W, Sec. 12, Blk. 26, P.S.L. Sur.
T.D. 2,940 ft.; ran tubing; flowed 230 bbls. in 12 hrs.
Richardson's No. 1 Walton, 1,010 ft. from S and 330 ft. from W, Sec. 1, Blk. B-3.
Swedging csg.
Sid Richardson's No. 1 Hill, 1,980 ft. from E line, 660 ft. from S line, Sec. 18, Blk. B-11, P.S.L. Sur.
Drlg. 3,804 ft.
Sayre Oil Co.'s No. 1 Leck, 330 ft. from S and E, Sec. 2, Blk. 26, P.S.L. Sur.
Fishing 2,595 ft.
Sayre Oil Co.'s No. 2 Howe, 330 ft. from N and W, Sec. 12, Blk. 26, P.C.L. Sur.
Location.
Skelly Oil Co.'s No. 2 Halley, 1,320 ft. from N and 2,200 ft. from E, Sec. 25, Blk. B-11, P.S.L. Sur.
Set csg. 2,825 ft.
Sinclair Prairie Oil Co.'s No. 1 Cummings, 2,310 ft. from N and 330 ft. from E, Sec. 11, Blk. 26, P.S.L. Sur.
Flowed 30 bbls. day.
Sinclair Prairie Oil Co.'s No. 2 Cummins, 330 ft. from N and E, Sec. 11, Blk. 26, P.S.L. Sur.
Set csg. 250 ft.

East Central Texas Wildcats

(Continued from Page 44)

L. P. Kean's No. 1 J. B. Hunter, R. Sowell Sur., 300 ft. from SW and 150 ft. from SE of 50-ac. tract, 4 miles S of Terrell.
S.D. 2,500 ft.

LIMESTONE COUNTY

Chapman's No. 1 Hunt, 200 ft. from N and 350 ft. from W line 34.75-ac. tract, Israel Wood Sur., 3 miles NE of Kosse.
Drlg. 1,055 ft.
C. F. Carter's No. 1 Dean, 660 ft. from SE and 330 ft. from SW lines of 75-ac. tract, P. Valella Sur., 3½ miles SW of Mexia.
Drlg. 1,634 ft.
Doughtry et al's No. 1 S. Welch, 150 ft. from NW and 900 ft. from NE of 77.64-acre tract in A. Varilia Sur., 4 miles W of Groesbeck.
T.D. 852 ft.
Pure Oil Co.'s No. 1 Rogers, 860 ft. S and 2,700 ft. W of 230-ac. tract, P. Villeria Sur.
Drlg. 750 ft.
Schultz' No. 1 Roy Ward, NE cor. of 73.3-ac. tract, 5 miles W of Mexia Field, Harrison York Sur.
Derrick.
V. V. Waite's No. 1 Barrow, 650 ft. from S and 950 ft. from E line of 320-ac. tract, W. G. McKenzie Sur., 3½ miles NW of Thornton.
Pits.

NACOGDOCHES COUNTY

Murray Oil Co.'s No. 1 C. B. Watkins, 150 ft. from N line and 330 ft. from NW lines of 160-ac. tract, 3 miles S of Caro, H. Y. Bailey Sur.
S.D. 3,925 ft.
Wells et al's No. 1 Z. Ramblin, 900 ft. N and 330 ft. W of SE cor. of tract and survey, J. Simpson Sur., 12 miles NE of Nacogdoches.
Rigged up; elev. 320 ft.

NAVARRO COUNTY

Bennett Brothers' No. 1 T. E. Stewart, 150 ft. from NE line of lease, 10 miles SW of Corsicana, Wm. R. Bowen Sur.
S.D. 1,136 ft.
R. B. Codding et al's No. 1 Lela Kent, 450 ft. from S line and center of N and S lines of lease, 3 miles NE of Chatfield, C. B. Emmons Sur.
S.D. 1,550 ft.
W. J. Keeling et al's No. 1 J. F. Rushing 484 ft. from N line and 150 ft. from W line of 184-ac. tract, 6 miles SW of Richardson, Henry Ford Sur.
T.D. 2,880 ft.
McCullough et al's No. 1 C. Berry, 330 ft. from SE cor. of 35-acre tract, 1 mile W of Dawson, William Moss Sur.
S.D. 625 ft.
Syarn Oil Co.'s No. 1 Love, 330 ft. out of SE cor. of J. L. Strother Sur.
Rigged up.

RED RIVER COUNTY

Abercrombie & Harrison's No. 1 Roberts, 4,500 ft. from E and 500 ft. from N line of John Ware Sur., 8 miles N of Clarksville.
Drlg. 926 ft.; elev. 429 ft.
Dinger's No. 1 W. T. Norris, 1,000 ft. from S and 1,900 ft. from W of 400-ac. tract, Jos. Guest Sur., 1 mile S of Detroit.
Derrick.

RUSK COUNTY

George Hudson et al's No. 3 Jeff Phillips 150 ft. from N line of survey and 700 ft. from W line of 100-ac. tract, 4 miles SE of Minden, N. Villaria Sur.
S.D. 3,673 ft.
Ben Lamb's No. 1 H. Leath, 330 ft. out of NW cor. of 185-ac. tract in L. J. Dooley.
S.D. 600 ft.

SMITH COUNTY

Deck et al's No. 1 Dendall, 330 ft. from S and W of 55-ac. tract, J. Williams Sur., 3 miles E of Van Field.
S.D. 1,100 ft.
Fair et al's No. 1 Rushing, 1,000 ft. SE of old hole, 1½ miles SE of Whitehouse.
S.D. 4,673 ft.
Paul S. Williams et al's No. 1 Dean, 320 ft. E and 730 ft. N of 100-ac. tract in Denson Moore Sur., 1 mile NE of Bullard.
Coring 4,690 ft.; top Austin 4,368 ft.

UPSHUR COUNTY

Byrd & Frost's No. 1 Pittsburgh National Bank, 330 ft. out of most northerly SE cor. of John Parker Sur.
Drlg. 3,266 ft.; Pecan 2,445-2,965 ft.

VAN ZANDT COUNTY

Delcambre et al's No. 2 Crim, 400 ft. from S and 150 from E lines, Nacogdoches Co. School Lands.
T.D. 1,327 ft.; to test.
Pet. P. L. & Storage Co.'s No. 4 Mrs. S. McGee, 450 ft. S of N line and 155 ft. E of W line of 53.4-ac. tract, Blk. 20.
S.D. 1,268 ft.
Florence Oil Co.'s No. 2 Sanger, 316 ft. W of SE cor. and 151 ft. S of S line of Pure-Blackstock lease, John Walling Sur.
Rig.
Gillum and Allen et al's No. 1 A. T. Bass, 150 ft. from W line and 150 ft. from N line of 10-ac. tract, William Hart Sur.
S.D. 1,700 ft.
Green and Winn's No. 1 Eaton, 330 ft. out of most westerly SW cor. of J. Wilson Sur., 2 miles SE of Martin.
Location.
American Oil Co.'s No. 1 Bryant, 483 ft. N of same operator's dry hole, Nacogdoches County School Land Sur.
S.D. 1,325 ft.
Lane-Tex Co.'s No. 1 Listenbee, 150 ft. N and E of tract, Wm. Daniel Sur.
S.D. 1,279 ft.
Martin-Evans' No. 2 Palmer, 544 ft. from S and 656 ft. from E of 69.5-ac. tract, Nacogdoches County School Land.
Rigged up.
Overton Ref. Co.'s No. 5 Carter, 1,028 ft. S and 300 ft. E of No. 3, Wm. Daniels Sur.
T.D. 2,960 ft.; to test; top sand 2,936 ft.
Miller et al's No. 1 J. M. Palmer, 150 ft. from S and E lines of 69-ac. tract, Nacogdoches County School Land Sur.
S.D. 1,150 ft.
Peden and Olson's No. 1 J. M. Palmer, 200 S of No. 2 and 140 ft. from W line of tract, J. Goodman Sur.
S.D. 1,288 ft.
M. Rouch et al's No. 1 Bearden & Palmer 150 ft. out of SE cor. of 61-ac. tract, Nacogdoches C.S.L.
S.D. 1,237 ft.
Wadley's No. 1 Carnes, 500 varas N and 1,000 varas E of most northerly SE cor. of 585-ac. tract, S.P. Sur.
S.D. 2,700 ft.

WOOD COUNTY

Bryant & Spear's No. 1 Consumer Lignite Co., 150 ft. out of most westerly NE cor. of J. F. McMahon Sur., SE of Alba.
Rigged up.

Southwest Texas Wildcats

(Continued from Page 41)

Harry Adams' No. 1 Holman, 1,650 ft. N line, 330 ft. from E line, Sec. 22, C.C.S. D.&R.G.N.G. Sur.
S.D. 602 ft.; showing oil at 520-25 ft. and trying to shut off wtr.

FAYETTE COUNTY

Clark et al's No. 1 Becker, in townsite of Roundtop.
Location.
Ross Fenton's No. 1 Kasper (263-ac.), 3,000 ft. NW and SW lines of Thos. Green Sur.
Location.

FRIO COUNTY

Amerada Pet. Co.'s No. 3 Halff & Oppenheimer, 2,100 ft. from southwesterly NW line, 300 ft. NE line of B. J. Gilman Sur. No. 16.
Location.
W. T. Shoemaker's No. 1 M. Roche, 150 ft. SW cor. of Carl Wenzel Sur. No. 139.
S.D. 1,550 ft.

GILLESPIE COUNTY

Ed L. Nixon's No. 3 Lindig, 12,694 ft. S line, 1,333 ft. W line, Maria Josepha Guerra Sur. No. 41, or 6 ft. S of No. 1.
Standing 653 ft.

GOLIAD COUNTY

Magnolia Pet. Co.'s No. 1 Albrecht, 660 ft. N line, 330 ft. SW line of J. P. Reid Sur.
Drlg. 4,715 ft.

GUADALUPE COUNTY

J. W. Burrows' No. 1 Beuhring, 1,000 ft. S line, 750 ft. W line of Jos. Clements Sur., SW Darst Creek Field.
Location.
W. J. Walton's No. 1 Mrs. C. Hoffman, 330 ft. N and E lines of 100-ac. tract, Wakefield Sur.
Location.
H. H. Weinert et al's No. 1 Sylie Schmidt, Wakefield Sur., E of Kingsbury Field.
Fishing 2,276 ft.

HIDALGO COUNTY

Clay, Spencer & Hood's No. 1 Brooks & Showers, 330 ft. N and E lines of Lot 4, Blk. 12, Por. 79-80.
Drlg. 400 ft.
Hardy & Lynch's No. 1 Southland Dev. Co., 330 ft. N and W lines, Blk. 14, Sur. 17.
Rigging up.
Harrison, Medline et al's No. 1 G. L. & C. Co., 950 ft. W line, Por. 42, 330 ft. N of Old Military Road.
Spudded.
Kingwood Oil Co.'s No. 1 Baskom, 215 ft. W line, 218 ft. N line of Lot A-23, Blk. 49, Porcion 41.
Drlg. 2,754 ft.
Kingwood Oil Co.'s No. 1 Doughty, 1,214 ft. from N line, 3,750 ft. from W line of Tract 90, in San Salvador del Tule grant.
Spudded.
Maxwell-Young's No. 1 King, 175 ft. N and E lines of Lot 8, Blk. 11.
T.D. 875 ft.; drlg.
Medlin et al's No. 2 G.L.&C.C., E of No. 1.
Ready to spud.
Union Sulphur Co.'s No. 1 John C. Engleman, 400 ft. S and W lines, Lot 8, Blk. 79, Mestenas tract.
Drlg. 6,960 ft.
Downey & Morton's No. 1 Deskam, 450 ft. from E line, 55 ft. from S line of Blk. 34, Por. 45.
S.D. 2,310 ft.
Gato Oil Co.'s No. 1 Brocks & Showers, 500 ft. N line, 400 ft. W line of Tract 3, Blk. 26, Por. 79.
Drlg. 2,486 ft.
Jenkins & Secton's No. 1 John D. Puckett, 330 ft. N and W lines, Share 96, San Salvador del Tule grant.
Derrick.
Union Sulphur Co.'s No. 2 American Rio Grande L. & I. Co., 400 ft. from S and E lines of tract, Blk. 36, North Capisallo district.
T.D. 3,044 ft.; twisted off 2,629 ft.

JIM HOGG COUNTY

Miller & Pippin's No. 1 Yeager, 527 ft. S line, 150 ft. E line of Blk. 6, Sur. 20.
Rigging up.
John D. Norwood's No. 1 C. W. Hellen, 330 ft. N and W lines, Sur. 48.
T.D. 1,370 ft.; S.D. for orders.
J. M. Shugart's No. 1 R. Holbien, 100 ft. from N line, 330 ft. from S line of Blk. 55, Sur. 17 of Holbien Subd., of Las Animas grant.
S.D. 490 ft.
Texas Co.'s No. 1 Guiterrez, 2,310 ft S line, 330 ft. E line of Sur. 164.
Spudded and set surface csg.
Texas Co.'s No. 1 C. W. Hellen, 5,742 ft. S line, 6,562 ft. E line of Sur. 150.
Location.

JIM WELLS COUNTY

O. W. Killam's No. 4 Wade, ¼ mile N of No. 3.
Moving in rig.
Smith & Storey's No. 1 Martha E. Ellworth, 330 ft. N and W from SE cor. of W½ of W 426 acres of Stanley Welch Sur.
T.D. 6,115 ft.; comp. as gasser; 1,100 lbs. closed-in pressure; 930 lbs. working pressure.

KARNES COUNTY

American Liberty Oil Co.'s No. 1 Von Roeder, 330 ft. from NE and SE lines of 204-ac. tract in Johnson Sur.
Spudded and set surface csg.
E. E. Green's No. 1 Miss Olive Henke, 2,640 ft. from SW cor. N along W line, thence at R/A 330 ft., Seguin grant.
Sand 1,505-09 ft.; S.D. for repairs.
Pacific Gas & Fuel Co.'s No.2 Choate, near No. 1.
Moving in material.
J. A. Thompson's No. 1 Lyons, 330 ft. SW line, 1,320 ft. SE of N cor. of Choate land, Bass Sur.
T.D. 3,431 ft.; comp. as gasser; ¾-in. choke with 455 lbs. tubing pressure and 550 lbs. csg. pressure.

KERR COUNTY

Emerald Oil Co.'s No. 1 Whitworth, 1,160 ft. from S line and 1,333 ft. from E line of Sec. 1,439, of the H.E.&W.T. Sur.
Prepare to deepen; T.D. 650 ft.
Jeff Love and Eastland Oil Co.'s No. 5-B Jeff Love, 1,500 ft. SE of No. 1 and 1,530 ft. from SE cor. and 300 ft. from N line of Sec. 1,591.
1,550 ft. of oil in hole; T.D. 3,530 ft.

LEE COUNTY

Jas. E. Pederson's No. 1 Turner, 1,860 ft. from N line, 150 ft. from E line of tract, David Hudson Sur.
Coring 6,415 ft.

LIVE OAK COUNTY

Arthur, Brunson & Hall's No. 1 W. P. Ward, 150 ft. from W line, 2,400 ft. from N line of 200-ac. tract, in B. Ayers Sur.
Location.
Baugh & McMillan's No. 1 Walton & Campbell, D. R. Fant Sur.
Drlg. 890 ft.
Berry & Hayes' No. 1 C. L. Terrell, 1,600 ft. N line, 330 ft. E line of Henry Sur.
Location.
Henderson Coquat et al's No. 1 Little, 1,320 ft. NE of S cor. of M. M. Shipp Sur. and 330 ft. N of S line.
Coring 4,995 ft.
Loma Oil Co.'s No. 2 Brewer, 330 ft. from SE and NE lines of 100-ac. tract in Sparks Sur.
Abd. 1,106 ft.
Loma Oil Co.'s No. 1 O. M. Withers, 330 ft. S and W lines of tract in T. B. Sparks Sur.
Spudded.
Luling O. & G. Co.'s No. 1 Rex, C of SW of G.H.&H. Sur., Abstract 197, 3 miles S of Mileska.
Rigging up.

MAVERICK COUNTY

Mike Chorgas et al's No. 1 Mathews, on edge of municipal airport at Eagle Pass.
C.O.; T.D. 480 ft.

McMULLEN COUNTY

H. K. Boysen's No. 1 Hagist, 990 ft. S, 330 ft. W of NE cor. Sec. 10, H.&T.C.Ry. Sur.
Abd. 2,294 ft.

MEDINA COUNTY

Scoggins & Sanders' No. 1 L. W. Burrell, 150 ft. from E line, 1,750 ft. from N line of M. E. Gage Sur. 395.
S.D. 1,825 ft.

MILAM COUNTY

Barron & McGee's No. 1 R. Lundgren, 1,100 ft. NE line, 600 ft. NW line of 125-ac. tract in L. Kimbro Sur.
Location.
C. F. Drake et al's No. 1 Standard Coal Co., 970 ft. SW line, 1,700 ft. SE line of G. L. Johnson Sur.
S.D. 1,575 ft.; (corrected).
Second Natl. Bank's No. 1 B. P. Ward, 150 ft. SW line, 950 ft. SE line of 100-ac. tract, L. Taylor Sur.
2,862 ft.; no report.

REAL COUNTY

M. J. Heartwell et al's No. 2 L. J. Haby, 694 ft. from W line and 2,153 ft. from S line of A.B.&M. Sur. No. 175.
T.D. 2,837 ft.; moving in new engine.

SAN PATRICIO COUNTY

Allied Minerals' No. 1-A Ramsey, 466 ft. E, 220 ft. N of SW cor. of the North B. Giddings Sur. on a 1,000-ac. tract.
Sandy shale 2,642 ft.; moving in heavier rig; S.D.
Carpenter et al's No. 1 Sadler, Mud Flats area.
Standing 6,009 ft.
Lonnie Glasscock's No. 1 M. F. Timmons, 330 ft. out of SE cor. of Blk. 27, San Patrico townsite.
Drlg. 6,100 ft

STARR COUNTY

Armstrong, Emanuel & Adams' No. 1 S.C. C.C., 330 ft. from S and E lines of Blk. 57, Porcion 88-89.
Drlg. 875 ft.
Conway & Emanuels' No. 1 S.C.C.C., 360 ft. W line, 330 ft. S line, Blk. 62, Jeffries Lambeth Div., Porcion 88-89.
Moving in material.
C. R. Borah's No. 1 A. Guerra, San Jose grant, 330 ft. from N and 150 ft. from E lines of Sec. 6 (NE part of county).
Reaming 2,687 ft.
John H. Clopton's No. 1 Roos, 13,155 ft. N of highway along E line of Por. 92, 3,800 ft. N, 80 deg. 45 min. W.
Moving in material.
Crawford et al's No. 1 Hicks et al, 150 ft. SE and NE line of NW, Perdernal grant.
801 ft.; no report.
Dainwood Oil Co.'s No. 1 Guerra, 5,280 ft. W line and N line of Share 26, Porcion 70-71-72.
Location.
R. H. Vise's No. 1 Carruth, 3,690 ft. S line, 3,300 ft. W line, Share B-1, Porcion 91-92.
S.D. 3,003 ft.
J. T. Kyle et al's No. 1 G.L.&C.C., 330 ft. midway between N and S lines of Lot 4, Porcion 100.
Location.
Morris & Bryan's No. 1 Hicks & Hicks, 660 ft. NE line, 2,000 ft. SE line of 500-ac. tract, Pedernal grant.
Location.
C. L. Smith et al's No. 1 J. M. Longfellow, 330 ft. out of NW cor. of Sur. No. 281.
Drlg. 5,000 ft.
Heep Oil Co.'s No. 1 Guerra, 330 ft. from NE and SE lines of Blk. 35, J. N. Crawford Subd., Por. 56, Jurisdiction of Mier.
Drlg. 1,037 ft.
Smith & Weston's No. 1 M. M. Garcia, Blk. 9, Sur. 908.
S.D. 4,009 ft.
Dale Sneed's No. 1 Y. and V. Guerra, 330 ft. W line of Por. 68, 330 ft. S line of 1,000-ac. block of N end of Por. 92, in Por. 68.
Moving in derrick.

E. L. Younkin's No. 1 Kelsey Bass, 330 ft. from S line, 7 ft. from W line of Blk. 19, in Porcion 87.
Standing 2,572 ft.

TRAVIS COUNTY

Barron & McGee's No. 1 R. Lundgren, 1,100 ft. NE line, 600 ft. NW line of 125-ac. tract in L. Kimbro Sur.
Abd. 925 ft.

Humble O. & R. Co.'s No. 3 Buck Christian, 2,150 ft. SW line, 2,300 ft. NW line of J. P. Kemp Sur.
Drlg. shale and shells 625 ft.

Mimms, New & Anderson's No. 1 Bohm, 1,250 ft. SW along NW line of Bohm tract from N cor. and 150 ft. NW in S. Del Valle Sur.
Standing 515 ft.

C. A. Stubbs' No. 1 Julius Kerlin, 530 ft. SW line, 450 ft. NW line of 123-ac. tract in I. Lindsay Sur. No. 41.
Standing 709 ft.

Title et al's No. 1 Johnson, 330 ft. each way from cor. of 50-ac. tract in Kimbro area.
Drlg. chalk 850 ft.

WEBB COUNTY

Detterhaim & Jones' No. 1 M. Jones, 600 ft. E line, 1,620 ft. S line of Sur. 1,640.
Standing 455 ft.

Mills Bennett's No. 1 Slator, 330 ft. SW and NW lines of Blk. 46, Mission Oil Co. Subd., Borrego grant.
Rigging up.

Payne et al's No. 1 Hoggtorp, Blk. 6, Sur. 1,110, W of Oilton.
Spudded; boiler blew up.

WILLACY COUNTY

South Texas Dev. Co.'s No. 1 Armendaia, 1,500 ft. W of Arroya Colorado River, 1,200 ft. N of S line of Tract 4.
Drlg. 500 ft.

WILLIAMSON COUNTY

F. L. Brown's No. 1 Carl Seggren, 960 ft. W line, 240 ft. S line of 114.12-ac. tract in S. Woodruff Sur.
Location.

Fritz Fuchs' No. 1 Pflugger, 500 ft. S and E lines of Jacob Sapington Sur.
Standing 43 ft.

Johnson & Ray's No. 1-B M. Oxford Smith, 600 ft. S of No. 1-A in S. Williams Sur.
S.D. 20 ft.

Johnson & Ray's No. 1-A Mary Smith Oxford, 350 ft. S, 40 deg. E of No. 1 Williams Sur.
S.D. 1,149 ft.

J. Morgan Russell's No. 1 Nelson, 150 ft. S line, 1,115 ft. E line of John L. Justice Sur. No. 2.
S.D. 894 ft.

J. Morgan Russell's No. 3 Nelson, 3,200 ft. from CEL of W. Donaho Sur. No. 117, 1,400 ft. from CSL.
S.D. 875 ft.

WILSON COUNTY

Ray Oil Co.'s No. 1 J. M. McDaniel, 1,700 ft. from SW line, 350 ft. from NW line of 193.5-ac. tract in Concepcion Bostello Sur. No. 9.
Rigged up and S.D.

J. C. Yancey's No. 1 Lyssy, 300 ft. from SE and SW lines of lease in D. J. Holt Sur.
T.D. 1,400 ft.; S.D. in shale.

ZAPATA COUNTY

Danvers & Harrison's No. 1 M. J. Vela, 630 ft. NE line and 300 ft. NW line, or 3,140 ft. E line and 330 ft. N line of Por. 39, Blk. 7, Bela Subd.
Drlg. 1,653 ft.

Merle Gunby's No. 4 Alice D. Haynes, 760 ft. from SE line, 200 ft. from SW line of Blk. 4, Haynes Subd. of Comitas & Villa grant.
Abd. 1,155 ft.

H. B. & W. Oil Co.'s No. 1 Cuellar, 150 ft. NE line, 450 ft. SE line of Blk. 3, Sur. 2, Papas Subd., Porcion 34.
Drlg. 1,345 ft.

R. B. Morrison's No. 1 Vela, 1,320 ft. SW line, 660 ft. SE line of Blk. 5, Re-Plat of Jamison Subd., Por. 20.
Showing gas 2,142 ft.

Joe Palmer's No. 1 J. M. G. Martinez, 150 ft. SE and SW line, Blk. 37, Sur. 434.
Standing 680 ft.

A. H. Wray's No. 5 Gopher Trust, 330 ft. NE and NW lines of Blk. 13, Sur. 1, San Ignacia Subd., Borrego grant.
Drlg. 2,007 ft.

ZAVLA COUNTY

Van Beavers et al's No. 1 Flowers, 1,600 ft. E line, 600 ft. N line of Sec. 19, L&G.N. Ry. Sur., Blk. 1.
Rigging up.

Humble Oil & Ref. Co.'s No. 1 R. L. Ball 330 ft. E of W line of Luciana De la Gar-
Abd. 2,880 ft.

Southwest Texas Proven

Week Ending January 12

NORTH DALE POOL—BASTROP COUNTY

Cole Pet. Co.'s No. 1 Rubin Gage, NE cor. of tract, 150 ft. each way from corner.
Location.

Marts & Beaver's No. 1 Voss, 875 ft. from SW line, 155 ft. from NW line of 100-ac. tract, in Litton Sur. No. 1.
Abd. 1,825 ft.

Joe E. Mills' No. 1 Mrs. W. J. Cardwell, 900 ft. from SE line, 1,200 ft. from SW line of tract, J. A. Navarro Sur.
S.D. 1,475 ft.

Ogden & Reed's No. 3 M. F. Tally, 300 ft. NE line, 200 feet SE line of 70-ac. tract in Joshua Gray Sur.
Abd. 2,765 ft.

CAESER—BEE COUNTY

Falvey et al's No. 1 J. J. Grissom, 150 ft. N and W lines of 771.9-ac. of McEarly Sur.
T.D. 3,041 ft.; I.P. 700 bbls. per day

Luling O. & G. Co.'s No. 5-B Ruhmann.
Drlg. 1,500 ft.

PETTUS—BEE COUNTY

Houston Oil Co.'s No. 5 Newman, 660 ft. N of No. 4.
Drlg. hard shale 970 ft.

TULETA—BEE COUNTY

Blanco Oil and Buchanan's No. 2 Peves, 300 ft. from S and E lines of their 100-ac. "A" lease.
T.D. 3,925 ft.; P.B. to whipstock and drill back to sand.

Heyser, Heard & Walton's No. 1 Walton, C of Blk. 1, Sur. 20.
Drlg. 3,137 ft.

Edwin M. Jones' No. 2 Robinson, 330 ft. from S line, 990 ft. from E line of SW of Sec. 5.
Location.

Edwin M. Jones' No. 2 Silcock, 990 ft. W line, 330 ft. N line of S½ NE Sec. 10.
Location.

Edwin M. Jones' No. 4 Skinner & Harris.
Derrick.

Edwin M. Jones' No. 5 Skinner & Harris, 330 ft. E line, 990 ft. S line of E½ NW Sec. 10.
Drlg. plugs 3,926 ft.

Houston Oil Co.'s No. 1 Ed Strauss, C of Blk. 2, SW Sec. 9, Uranga grant.
T.D. 2,959 ft.; I.P. 300 bbls. per day on ¼-in. choke.

Houston Oil Co.'s No. 2 Ed Strauss, C Lot 6, Sec. 9, Hahl Subd., Uranga grant.
Set 10-in. csg. at 377 ft.

Mills Bennett's No. 2 Harris, 990 ft. from E line, 330 ft. from S line of tract.
Location.

Mills Bennett's No. 2 Silcock, 330 ft. from S and E lines of 160-ac. tract.
Moving in material.

Mills Bennett's No. 1 Tuleta Mercantile Co., 330 ft. from N and W lines of SW Sec. 10.
Trying to blowout 2,700 ft.

HOCH—BEXAR COUNTY

Jack Crouch's No. 3 Hoch, 1,500 ft. S line, 300 ft. E line of Baerera Sur. No. 58.
Drlg. 350 ft.

Jack Crouch's No. 5 Hoch, 330 ft. S of No. 4, Baerera Sur. No. 58.
Location.

H. J. Trawalter's No. 7 fee, 150 ft. from N line, 450 ft. from E line of 202-ac. tract in S. Jett Sur. No. 53.
Standing 450 ft.

ALTA MESA—BROOKS COUNTY

Mrs. Florence East's No. 1 G. Madrigal, 300 ft. S line, 300 ft. E line of Share "B," R. G. Salinas grant.
Drlg. 2,100 ft.

Mrs. Florence East's No. 2 Madrigal, 2,970 ft. S line, 990 ft. W line of Share "B," R. G. Salinas grant.
Standing 120 ft.

DALE—CALDWELL COUNTY

McNeil Pet. Co.'s No. 1 J. M. Miears, 660 ft. NW line, 700 ft. SW line of 327-ac. tract in W. C. Swearingen Sur.
Drlg. in Serpentine with good showing of oil 2,401 ft.

DUNLAP—CALDWELL COUNTY

Moseley's No. 1 J. M. Pierce, 150 ft. E. line, 400 ft. S line of G. C. and W. P. Walker tract, Seale Sur. No. 8.
Coring chalk 2,203 ft.

GOVERNMENT WELLS POOL—DUVAL COUNTY

Brown & Nessly's No. 3 Curry, 330 ft. N and W lines of NE SW Sur. 62.
Location.

Brown & Nessly's No. 3 Runnels, 330 ft. S line, 990 ft. W line of NE NW Sur. 62.
Location; (reported drilling in error).

Edgington & Murray's No. 1 C. W. Hahl, 330 ft. N and E lines, Blk. 16, Sur. 250.
Skidding rig; standing 350 ft.

Government Wells Oil Co.'s No. 10 Lundell (State), 660 ft. S of No. 8.
Rigging up.

Magnolia Pet. Co.'s No. 2 Duval County Ranch, 330 ft. from S line, 990 ft. from E line of Sur. No. 57.
Derrick.

Magnolia Pet. Co.'s No. 4 Hahl-Burch, 330 ft. S line, 990 ft. E line of SW Sur. 43.
W.O.C. 2,230 ft.

Magnolia Pet. Co.'s No. 3 D. Ruiz, 672 ft. W line, 736 ft. NW line, Sur. 127.
Location.

Magnolia Pet. Co.'s No. 6 M. Ruiz, 330 ft. SE line, 743 ft. SW line, Sur. 574.
Drlg. 1,650 ft.

Magnolia Pet. Co.'s No. 1 A. Herbst, 330 ft S and E lines of Sur. 70.
Abd. 3,263 ft.

Newton & Andrews' No. 1 Bowe, 330 ft. S and W lines of Blk. 21, Sur. 250.
T.D. 2,345 ft.; I.P. 180 bbls. per day.

Russ Pet. Co.'s No. 6-C D.C.R.C., 330 ft. S and W lines of W½ NE of Sur. 62.
Drlg. 1,100 ft.

Salt Dome Oil Co.'s No. 1 Moody, 330 ft. from N line, 1,370 ft. from W line of Sur. No. 60.
Testing sand 2,373 ft.

Smith & Story's No. 12 Lundell, 330 ft. S line, 990 ft. W line of Sur. 48.
Testing 2,250 ft.

Texas Co.'s No. 12 D.C.R.C., 1,500 ft. S line, 480 ft. W line of SE of Sur. 362.
T.D. 2,293 ft.; I.P. 250 bbls. per day.

E. R. Thoas' No. 1 Bishop Cattle Co., 2,325 ft. E line, 330 ft. N line of S½ of Sur. 135.
Building derrick.

HOFFMAN—DUVAL COUNTY

Southwest Drlg. Co.'s No. 1 Cuellar, 330 ft. SW and NW line of NE of Sur. 114.
S.D. 1,527 ft.

LUCAS—LIVE OAK COUNTY

Houston Oil Co.'s No. 30 Cartwright, 1,030 ft. N of No. 26.
Set 10-in. csg. at 1,006 ft.

Lion Oil & Ref. Co.'s No. 2 McNeil, J. Curry Sur., 660 ft. N of No. 1.
T.D. 6,035 ft.; comp. at 4,300 ft. for 25,000,000 ft. of gas daily.

Lion Oil Ref. Co.'s No. 3 McNeil, 660 ft. N, 660 ft. E of No. 1.
Location.

SAM FORDYCE—HIDALGO COUNTY

Alamo Drlg. Co.'s No. 1 Guerra, Tract 254, Por. 40.
Drlg. 700 ft.

W. E. Butler's No. 1 F. B. Guerra, 93 ft. N line, 294 ft. S and W lines of 8.5-ac. tract in Tract 254, Por. 39-40.
Location.

Jack Clements' No. 1 Felipe Farias, 150 ft. from N and E lines of Share 273, Por 39, Reynosa.
T.D. 2,804 ft.; tested 300 lbs. on tubing, 200 lbs. on csg.; no report.

Danvers-Harrison & Davis' No. 1 Dr. Austin, center of E 7.2-ac. of S 14.4-ac. in Share 282, Por. 39.
Location.

Davis & Harrison's No. 1 Smith, S offset to No. 1 Guerra, of D. & H.
Coring sand 2,700 ft.

Porter Evans' No. 1 David Flores, Tract 262, Por. 38.
S.D. 2,230 ft.

Heep Oil Co.'s No. 3 Seabury, SE 26-ac. of Tract 256, Por. 38.
W.O.C. 2,757-85 ft.

Henshaw Oil Corp.'s No. 1 Seabury et al, C of SW 11.5 acres of NE 45.25 acres, Tract 256, Por. 38.
Location.

T. I. Larson's No. 1 G. G. Salinas, 330 ft. S and W lines of Share 10, Por. 41.
Standing 3,000 ft.

Moncrief & Showers' No. 2 John Lawrence, 305 ft. N line, 241 ft. E line of 13.5-ac., Tract 274, Por. 39.
Moving in derrick.

Moncrief & Showers' No. 1 C. E. Smith, Tract 3-B, Por. 41.
Moving in machinery.

Moss & Bass et al's No. 1 F. B. Guerra, 245 ft. N line, 300 ft. W line of 25 acres of S 50 acres of E 290 acres, Tract 254, Por. 40.
Location.

Navarro Oil Co.'s No. 1 Flores, Tract 275, Por. 40, 3,000 ft. SE of discovery well.
W.O.C. 2,751-58 ft.

Navarro Oil Co.'s No. 2 Seabury, 330 ft. S and W lines of N 25-ac. of SE 51-ac., Tract 256, Por. 38.
Sand 2,756-64 ft.; drilled plugs and is C.O.

J. M. Newman et al's No. 2 Flores, 190 ft. S line, 240 ft. W line of 10-ac., Tract 275, Porcion 40.
Location.

Reserve Oil Co.'s No. 1 Seabury, 330 ft. N and E lines of 28-ac. tract, Tract 256, Porcion 38.
Location.

Reserve Oil Co.'s No. 2 Seabury, 330 ft. S and E lines of 28-ac. tract, Tract 256, Porcion 38.
Location.

Rogers O. & G. Co.'s No. 1 Guerra.
Drlg. plugs 2,760 ft.

Sam Fordyce Oil Co.'s No. 2 Smith, 630 ft. N line, 164 ft. E line of NE 34.43 acres of Tract 278, Por. 40.
Moving in rig from No. 1.

Ed Sullivan's No. 1 E. B. Guerra, center of NE 10.77 acres of SW 40.7 acres of Tract 254, Por. 39.
Location.

Van Dresar et al's No. 1 W. R. Jackson, 330 ft. from N and W lines of 92-ac. tract, Por. 38-39-40, Blk. 273.
Location.

Weekly Oil Co.'s No. 2 Smith, 630 ft. N line, 164 ft. E line of NE 34.43-ac. in Tract 278, Por. 40.
Set surface csg. 200 ft.

Windsor Oil Co.'s No. 1 Doss, 330 ft. N line, 315 ft. E line of 55-ac. tract, Tract 278, Porcion 40.
Derrick.

Otto Woods' (Kingwood) No. 4 F. B. Guerra, 330 ft. S and E lines of NW 10 acres of S 150 acres. Tract 254, Por. 39.
Moving in derrick.

Otto Woods' No. 4 John Lawrence, 330 ft. from E line, 250 ft. from S line of W 40 acres. Tract 274, Por. 39.
Rigging up.

Otto Woods' (Kingwood) No. 5 John Lawrence, 165 ft. W line, 235 ft. N line of Tract 274, Por. 39.
Moving on.

SANDIA—JIM WELLS COUNTY

O. W. Killam's No. 4 Wade, ¼ mile N of No. 3 Wade.
Moving in rig.

Walsh & Long's No. 1 Allen.
Sand 2,763-78 ft.; with odor of oil, trying to ake D.S. test.

SEELIGSON—JIM WELLS COUNTY

Magnolia Pet. Co.'s No. 5 Seeligson, 1,330 ft. N, 660 ft. E of No. 2 well on Farm 1, Blk. 4 of Canalas Sur.
Drlg. 3,700 ft.

JACOB POOL—McMULLEN COUNTY

American Gas Co.'s No. 1 L. Jacobs Corp., 350 ft. W of SE cor., 160 ft. SE line of tract in Fadden Sur.
Spudded and S.D.

Loma Oil Co.'s No. 32-A Jacob, 660 ft. S of No. 31-A.
T.D. 977 ft.; I.P. 75 bbls. per day.

Loma Oil Co.'s No. 33-A Jacob, 660 ft. S of No. 32-A, 150 ft. E line of tract.
Location.

Motes & Bettingfield's No. 3 Lark, 660 ft. S of No. 1 and 330 ft. W line of lease.
Drlg. 405 ft.

Newton et al's No. 1 Murphy, SW cor. of Sur. 480.
Drlg. 1,610 ft.

L. D. Ormsby's No. 1 Jacob Corp., Sur. 50.
Drlg. 780 ft.

Stewart & Holding Co.'s No. 3 Jacob, 660 ft. S and 660 ft. E of No. 2, John Fadden Sur.
T.D. 895 ft.; S.D.

West & Witherspoon's No. 1 Lark.
Abd. 954 ft.

SINTON—SAN PATRICIO COUNTY

Heep Oil Corp.'s No. 2 R. Welder, 466 ft. from S line, 2,900 ft. from Eline of Adeline Welder tract in Victor Loupsey Sur.
Derrick.

Humble O. & R. Co.'s No. 1 Welder, NW of Circle W. Oil Co.'s 160-ac. lease.
Location.

Plymouth Oil Co.'s No. 2-B Welder, start at SW cor. of "B" lease, thence NW along the W line 2,100 ft., thence 350 ft. NE at R/A.
Drlg. 5,560 ft.

LOS OLMOS—STARR COUNTY

H. L. Curry's No. 1 Bass, 835 ft. E line, 2,522 ft. N line of Sur. 8, Por. 75-76-77.
Location.

J. P. Kennedy's No. 3 Kelsey-Bass, 200 ft. SE of No. 7 Kelsey-Bass in Blk. 7 of Porcions 75, 76 and 77.
Standing 710 ft.

CUEVITAS POOL—STARR COUNTY

Sun Oil Co.'s No. 5-C M. Guerra & Son, 1,320 ft. NE of 4-C La Sacatosa grant.
Location.

RIO GRANDE CITY—STARR COUNTY

Goodwin & Zimmerman's No. 1 Ida Davis, 33 ft. SW line, 576 ft. NW line of Blk. 16, Tract 4, Share 78, Por. 81.
Standing 1,460 ft.

AGUA DULCE—NUECES COUNTY

Clymore Prod. Co.'s No. 1-C Ollie Purl, 660 ft. N and E lines of Lot No. 2, Sec. 7, Peters Subd. No. 2.
Moving in rig.

United Prod. Co.'s No. 1 M. F. Rivera, 330 ft. at R/A N line, 330 ft. R/A E line of Rivers 168.82 acres, Palo Alto Matias Garcia Grant.
Drlg. 4,730 ft.; set 7-in. csg. at 4,744 ft.

SAXET—NUECES COUNTY

Southern Mineral Corp.'s No. 4 Ocher, 1290 ft. S line and 417 ft. E line of Ocher 202.52-ac. tract in Sec. 8.
Derrick.

WEST COLE POOL—WEBB COUNTY

American Liberty Oil Co.'s No. 10-A Bruni, 330 ft. from SW line, 240 ft. from SE line of Sur. No. 6, Arispe Grant Sur.
T.D. 3,424 ft.; comp. large gas well.

American Liberty Oil Co.'s No. 11-A Bruni, 508 ft. from NE line, 360 ft. from NW line of Sur. No. 8, Arispe Grant Sur.
T.D. 3,424 ft.; I.P. 22 bbls. per hr.; 5/16-in. choke.

American Liberty Oil Co.'s No. 12-A Bruin, 777 ft. from SW line, 330 ft. from SE line of Sur. No. 6.
Location (corrected).

American Liberty Oil Co.'s No. 8-A Bruni, 883 ft. NW line, 777 ft. SW line of Sur. 6, M. Arispe grant.
Abd. location.

Herman Brown's No. 4 Bruni Est., 418 ft. NE line, 260 ft. SE line, Blk. 7, Sur. 5, Arispe Grant.
T.D. 3,428 ft.; I.P. 20 bbls. per hr.

Cole Pet. Co.'s No. 88 R. Benavides, 990 ft. SW line, 330 ft. SE line, of Sur. 1
T.D. 3,413 ft.; I.P. 60 bbls. per hr.; ½-in. choke.

Cole Pet. Co.'s No. 19 Mrs. Benavides, 330 ft. SE line, 1,490 ft. SW line of 300-ac. tract in Callaghan Homestead Tracts.
Location.

Cole Pet. Co.'s No. 19 B. Benavides, 330 ft. NE line and SE line of 300-ac. tract.
Location.

Cole Pet. Co.'s No. 89 Benavides, 1,490 ft. SW line, 330 ft. NE line of Sur. 1.
Location.

Foster Barnsley's No. 6 Webster, 150 ft. E line, 510 ft. S line of NE SW Sur. No. 684.
W.O.C. 3,053 ft.

O. W. Killam's No. 1 Bruni, 200 ft. N and W lines of Blk. 55.
Tested gas 2,121 ft.; drlg. deeper.

O. W. Killam's No. 30 Bruni Est., 330 ft. SE line, 1,437 ft. SW line of Sur. 6, M. Arispe grant.
T.D. 3,413 ft.; P.B. to 3,700 ft. to comp. as gasser.

O. W. Killam's No. 31 Bruni, 2,187 ft. SW line, 150 ft. SE line of Sur. 6.
Location.

Magnolia Pet. Co.'s No. 6 Brennen-Benavides, 32 ft. SW line, 330 ft. SE line of Blk. 48, M. E. Hale Subd., Arispe grant.
Drlg. 1,000 ft.

Highland Oil Co.'s (Sun) No. 1 Bruni, 330 ft. NW and NE lines of tract in Sur. 7.
Location.

Sun Oil Co.'s No. 3 Bruni, 260 ft. SE line, 418 ft. NE line of Sur. 5.
Drlg. 3,436 ft.

Sun Oil Co.'s No. 4 Bruni, 418 ft. NE line, 250 ft. SE line of Blk. 19, Sec. 5.
Location.

BYERSVILLE—WILLIAMSON COUNTY

R. R. Ogden's No. 1 Matteck, 150 ft. N and W lines of 108.5-ac. tract in White Sur.
Location.

Ogden & Reed's No. 1 (2) C. G. Zieschang, 3,500 ft. SE line, 150 ft. SE line of 200-ac. tract in H. White Sur.
T.D. 890 ft.; showed oil, set csg.

G. L. Rowsey's No. 5-A Heep.
T.D. 1,580 ft.; I.P. 3 bbls. per day.

G. L. Rowsey's No. 5-A Sladek, 450 ft. NE line, 325 ft. SE line of 195-ac. tract in B-2 H. White Sur.
T.D. 856 ft.; I.P. 150 bbls. per day.

BLAS URIBE—ZAPATA COUNTY

O. W. Killam's No. 9 Bruni, 180 ft. SE line, 400 ft. NE line of Blk. 9, Blas Uribe tract, Borrego grant.
Drlg. 1,675 ft.

JENNINGS—ZAPATA COUNTY

Texas Co.'s No. 61 Whitehead, 16,488 ft. SW line, 1,007 ft. SE line of Cerrito Blanco grant.
T.D. 1,208 ft.; I.P. 10 bbls. per day on pump.

Norden & Morris' No. 1 Ramirez, 570 ft. SW line and NW line of Blk. 7, Share 20, Por. 91.
Showing gas; completing at 2,040 ft.

S.R.C. Oil Co.'s No. 5-F Cuellar, 200 ft. E line, 1,524 ft. N line of Blk. 21, Sur. 411.
Location.

MARTINEZ—ZAPATA COUNTY

Sulgrave Oil Co.'s (Sun) No. 1 M. B. Gutierrez, 2,960 ft. W line, 1,320 ft. S line of Sur. 162.
Derrick.

MIRANDO VALLEY—ZAPATA COUNTY

Cliff Durke' No. 1 R. Hinnant, 200 ft. W line, 150 ft. S line of Blk. 16, Sur. 116.
Location.

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Among Gulf Coast Drilling Contractors

George Echols is drilling a well in the Conroe Field, Montgomery County, for the Houston Oil Co. He also has one rig running for Texas Co. near Hebronville, Jim Hogg County, and a second rig preparing to start up for the same company in the same area. Rig is being moved in to southern Jim Hogg County to drill a well for Sun Oil Co. On a well for Walter Goldston, between Satsuma and Cypress, Harris County, drilling is proceeding at 2,980 feet. A sixth rig will be spotted on a location to be announced this week in the Greta Field.

Cron & Gracey are moving a rig into the Eunice, New Mexico, Field to drill a well for Sinclair Prairie Oil Co., which also has 11 rigs running on locations announced on this page last week.

Jeff Hooper is drilling a well for the Windsor Oil Co. in the Sam Fordyce Field, Hidalgo Couty. Surface casing has been set.

In addition to eight other rigs running in the Bosco, Cayuga, Louise and Roanoke Fields, Smith & McDannald are moving a rig into East Texas, in the London area, to drill a well for Tide Water Oil Co.

Turnbull & Irwin will spud this week on a well for the Cockburn Oil Co. near Penn City, Harris County. This 6,000-foot test will be near the Houston ship channel, and if a well should be brought in, it will prove up acreage held by the Houston Navigation District. Other new locations for 1935 will be announced by Turnbull & Irwin in the near future.

W. V. Bowles has set oil string in No. 1 B. E. Norvell for Bowles and Barsodi in the Manvel Field, Brazoria County, and it is predicted on the basis of sand cored that a very good well will be made. If such proves the case, the field will be extended north. Bowles also has one rig running for Texas Co. in the same field.

John Deering has moved rig in to drill No. 1 Cruse, his third well for the Batson Oil Co., in the Batson Field. No. 1 Hooks and No. 1 Jordan, the two previous wells, are both good producers.

Frank Long is drilling a 6,000-foot test between Harlingen and Brownsville, in Willacy County, for W. T. Daniels and others. Hole is drilling at 2,000 feet. Long has also leased a rig to Horace M. Smith, who is drilling a well at Sheppards Mott, Matagorda County, one of the most feared fields in this area because of the heretofore impenetrable heaving shale.

C & C Drilling Co. has completed No. 2 Carlton & York in the Livingston Field as a good producer, and rig will be moved to drill No. 3 Carlton & York in the near future. Company is also finishing a well at Rabbs Ridge for H. M. Naylor; is drilling on No. 6 Holmes in the Livingston Field for the Gem Oil Co.; and is waiting on orders near East Columbia on a well standing at 4,250 feet for C. E. Holt and C & C Drilling Co.

C & R G Drilling Co. is still waiting on surface casing for its second well near Alvin, Brazoria County. It is anticipated this well will be started in a few days, and the hole drilled to the Frio.

Carlisle & Williams have completed a 34,000,000-foot gasser in the Sam Fordyce Field, Hidalgo County, for the Phillips Petroleum Co. Rig is still over the hole, waiting on orders.

T. B. Cochran Drilling Co. is drilling a well for American Liberty Oil Co. on the Aldine-Bammel prospect in Harris County. Depth is 3,807 feet. Clarence Farris is in charge of tools for the contracting company.

The American Petroleum Institute's Division of Production has announced that no change will be made in the A.P.I. specification on sucker rods, which now permits the "No-Go" gauge to enter, or to be entered by, the product, 1½ turns. The letter ballot returned by members of the Institute's Committee on Pumping Equipment and Engines indicated a slight majority in favor of changing the present specification to 2½ turns, but arguments advanced by members for maintaining present stipulations were sustained.

Glenn McCarthy, head of Glenn H. McCarthy, Inc. (second from right), is one of the latest additions to the Gulf Coast drilling contractors fraternity. Mr. McCarthy recently completed a well for himself at Big Creek, Fort Bend County, and is now drilling a well for the West Production Co. in the Conroe Field, carried as West Production No. 2. The other men in the picture are, left to right: C. P. Smith, J. E. Lassiter and, on the extreme right, G. W. (Mike) Hunt, all members of the sales staff of the Houston Oil Field Material Co. Mr. Smith has charge of the Freer and Mission stores of the Houston Oil Field Material Co., and Lassiter and Hunt are attached to the Houston office of the company

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Brazoria Deep Production May Extend to North; Roanoke Test Deepest Gulf Coast Producer

By F. L. SINGLETON
Gulf Coast Bureau, The Oil and Gas Journal

HOUSTON, Tex., Jan. 14—Interest on the Gulf Coast the past week was centered on the Manvel Field, Brazoria County, and the Roanoke Field, Jefferson Davis Parish, La., where two tests have the appearance of extending production, one of which will make the deepest producer on the Gulf Coast provided it makes a well.

The deep Oligocene production found on the south end of the Manvel Field, northern Brazoria County, evidently has been extended to the north part of the field by the showing made by Bowles and Borsodi's No. 1 Norvell Investment Co., a quarter mile north of production, in the H.T.&B. Survey No. 23. It missed the pay found in the Miocene sand around 3,800 to 4,000 feet from which the majority of the wells in the field are producing, and picked up the sand section at 5,617 feet and was cored to 5,630 feet, the total depth. The operators made a four-minute drill stem test from 5,562 to 5,570 feet with a one-quarter inch choke on top and bottom, and recovered approximately 2 gallons of 45 gravity oil, with the pressure showing 400 pounds. Seven-inch casing has been cemented at 5,614 feet, and it is now waiting on cement to set. The test topped the Discorbis at 5,119 feet and is bottomed in the Marginulina topped at 5,365 feet.

The test is on the south part of 70 acres, which was held by the Pure Oil Co. and "farmed" out to W. V. Bowles and V. H. Barsodi for a half interest in the lease. Six new locations were made in the field, which are attributed to the showing being made by the extension test. Eight of the locations were made by Texas Co., which owns offset acreage to the well, and the other two were made by independent operators.

Roanoke Field

In the Roanoke Field, Jefferson Davis Parish, Louisiana, Humble Oil & Refining Co.'s No. 3 DeVilbiss, Section 14-9s-4w, three-quarters of a mile southwest of the discovery well, has apparently established itself as the deepest producer on the Gulf Coast by showing for a producer at a total depth of 9,425 feet. With 7-inch casing cemented at 9,310 feet and 2½-inch tubing swung at 9,393 feet, the well was washed in January 9, making an estimated 3,000,000 feet through a five-sixteenths inch choke, with tubing pressure 2,000 pounds and casing pressure 1,100 pounds. The well made three heads of crude oil and then went dead. It was then rewashed, and came in making a small amount of oil and considerable salt water through a one-quarter inch choke with tubing pressure 1,300 pounds and casing pressure 1,900 pounds. The field has three producers and one gas well, all producing from different horizons.

The Hastings area, northeastern Brazoria County, got another new location during the week when Mid-Texas Oil Co. staked No. 1 Edna G. Flint, 61 feet from the northeast line and 185 feet from the northwest line of Lot 4, in the B.B. B.&C. Survey No. 1, Abstract 160. It is approximately 600 feet north of Stanolind Oil & Gas Co.'s No. 1 J. W. Surface, the discovery well, and makes the fourth location in the field since the discovery. The discovery well in the W. T. Hughes Survey No. 2 has been killed a third time due to a leak in the 9⅝-inch casing, and the operators are drilling out the back pressure valve to pull the screen, and will lower the 7-inch casing which was originally set at 5,975 feet to approximately 5,980 feet. The two new locations made last week by Stanolind Oil & Gas Co. are being rigged up and will probably get under way during the week.

Waller County

The same company's No. 1 J. W. Thorp, wildcat in southeastern Waller County, is preparing to drill plug after cementing 7-inch casing at 6,988 feet. It is bottomed in shale at 7,005 feet, and will be carried deeper. An electrical coring test was made during the week which showed sand sections from 6,980-85 feet. It topped the Cockfield at 6,158 feet and has encountered several sands which showed gas with distillate odors. It is in the J. M. Bennett Survey No. 100. In the southwestern part of the county, on the San Felipe Dome, Seaport Oil Co.'s No. 1 J. W. Avery, due south of the discovery well, and which has been in the process of completion for several weeks, was abandoned as a failure after testing considerable water at 2,996 feet, the total depth. On the extreme southeast flank of the dome, Texas Co.'s No. 1 J. H. Jones in the William Cooper Survey, a scheduled deep test for the dome is drilling in sticky shale below 4,107 feet.

Louise Field

In the Louise Field, Wharton County, Pure Oil Co.'s No. 2 Stewart, originally drilled to a total depth of 8,271 feet, perforated the 9⅝-inch casing with eight holes from 6,365-72 feet and on a 30-minute drill stem test, through a three-eighths inch choke on bottom and one-quarter inch choke on top, recovered 4 thribbles of drilling mud and 46 thribbles of salt water. Operators have cemented back and set a whipstock at 5,863 feet and are preparing to sidetrack. Location is in the Morris and Cummings Survey, Section 25. Same company's No. 1 Wharton, F. Walnut Survey, after making a drill stem test last week from 5,135-70 feet which showed 50 thribbles of clean oil in 10 minutes, topped the salt water sand at 5,175 feet and is drilling in lime below 5,460 feet.

Dickinson Area

In the Dickinson area, Galveston County, Pure Oil Co.'s No. 1 Shelor, which was completed for a distillate producer a few weeks ago at a total depth of 8,016 feet, is being killed, and will be carried deeper in search for oil. Originally completed for an initial of approximately 10 bbls. per day, it has increased and was making 115 bbls. per day through a three-sixteenths inch choke, with tubing pressure 2,400 pounds and casing pressure 2,500 pounds. Due to the high gas pressure, it is expected to be several days before the well is killed. In the same county, the wildcat test of Texana Gulf Oil Corp., No. 1 T. F. Shaw and Ed Hall, in the Levi Jones Survey, on Galveston Island, is bottomed at 5,117 feet and the operators are rigging up to core.

Chambers County

The wildcat test of Humble Oil & Refining Co., No. 1 A. O. Middleton, in the A. Middleton Survey, Section 58, central part of Chambers County, is plugging back from a total depth of 4,302 feet to 3,750 feet due to the hole being 2 degrees off at 3,800 feet. Several miles southeast, Sun Oil Co.'s No. 1 Hamilton, an interesting wildcat test in the J. T. White Survey, Section 128, topped the Discorbis at 6,382 feet, the Heterostegina at 7,003 feet and is drilling ahead in shale at 7,073 feet.

Lavaca County

In Lavaca County, L. A. Douglas' No. 1 Mat Pustka, in the Moses Mitchell Survey, has been marked off the list as a failure at a total depth of 3,003 feet. It topped the Hockleyensis at 1,880 feet. The other active wildcat in the county is Humble Oil & Refining Co.'s No. 1 W. T. Wilson and others, in the John C. Crenshaw Survey. Late in the week it was below 6,856 feet in hard shale, and had not shown anything of importance.

Daily Average Production

Daily average production for the week ending January 5:

TEXAS GULF COAST

Field and county—	Dly. av.
Barbers Hill, Chambers	18,248
Blue Ridge, Fort Bend	1,301
Conroe, Montgomery	46,521
Esperson, Liberty	1,326
Goose Creek, Harris	3,130
Greta, Refugio	13,036
Hankamer, Liberty	1,084
High Island, Galveston	7,717
Hull, Liberty	6,746
Humble, Harris	3,394
Livingston, Polk	1,982
Manvel, Brazoria	5,113
Markham, Matagorda	1,417
Pettus, Bee-Goliad-Karnes	3,883
Pierce Junction, Harris	3,049
Port Neches, Orange	1,935
Raccoon Bend, Austin-Waller	4,663
Refugio, Refugio	4,294
Saxet, Nueces	1,863
Sour Lake, Hardin	1,491
Spindletop, Jefferson	2,586
Sugarland, Fort Bend	5,957
Thompson, Fort Bend	11,594
Tomball, Harris-Montgomery	4,920
West Columbia, Brazoria	2,723
Other pools	13,675
Total Texas Gulf Coast	173,595

LOUISIANA GULF COAST

Black Bayou, Cameron	1,993
Bosco, Acadia-St. Landry	12,705
Caillou Island, Terrebonne	5,404
Cameron Meadows, Cameron	1,176
Evangeline (Jennings), Acadia	1,076
Gillis, Calcasieu	1,035
Hackberry (East), Cameron	5,695
Iowa, Jefferson Davis-Calcasieu	14,165
Lake Barre, Terrebonne	5,129
Lake Washington, Plaquemines	1,894
Leesville, LaFourche	17,768
Lockport, Calcasieu	2,305
Port Barre, St. Landry	2,648
Roanoke, Jefferson Davis	1,785
Sulphur, Calcasieu	2,567
Vinton, Calcasieu	2,771
Other pools	4,281
Total Louisiana Gulf Coast	84,407
Total Texas Gulf Coast	173,595
Total Gulf Coast	258,002

Mykawa Field

West Production Co. has abandoned its No. 1 Wilson Lobit, in the J. F. Rothas Survey, Block 17, Mykawa, Harris County, at a total depth of 6,000 feet in shale. Danciger Oil & Refining Co.'s No. 1 Williams, same field, is waiting on ce-

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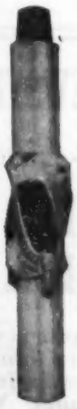

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ment to set, bottomed at a total depth of 4,890 feet.

Batson Field

On the southeast flank of the Batson Field, Hardin County, Deering and Burt's No. 1 Jordan, which blew out of control last week, making an estimated 50,000,000 feet of gas, and then sanded up, was completed during the week, and on a 24-hour gauge it made 290 bbls. of oil through a five-eighths inch choke, with casing pressure 570 pounds. It is bottomed at 4,927 feet, with 7-inch casing cemented at 4,859 feet. This is the second producer for the southeast flank of the dome, recently proven productive, by the same operator's No. 1 Hooks.

Livingston Field

In the Livingston Field, Polk County, Sun Oil Co.'s No. 2 Pratt, A. Viesca Survey, bottomed in sand at 4,244 feet, has been completed for an initial production of 232 bbls. of pipe line oil in 24 hours through a one-quarter inch choke, with tubing pressure 425 pounds and casing pressure 750 pounds. Operators are moving the rig used in this well to their location in the Kittrell Field, Houston County, which will be their first test to be drilled in that field. Ownby Drilling Co. is clearing location and moving in a rig for its No. 1 H. J. Pratt, which is being drilled on farmed-out acreage held by Shell Petroleum Corp. It is a south offset to Sun Oil Co.'s No. 2 Pratt and is 200 feet from the north and east line of the H. J. Pratt 220.3-acre tract, in the A. Viesca Survey. In the northern part of the field, B. M. York and others' No. 2 Kingsbury County Holding Corp., A. Viesca Survey, is bottomed in sand at 4,334 feet, and after the operators had swabbed the well for 24 hours and were unable to lower the fluid more than 1,000 feet from the top, which is estimated to be 60 per cent salt water and 40 per cent oil, they began laying a line to Gist Oil Corp.'s gas well, and will flow the well with gas.

Atlantic Oil Producing Co., Kirby Lumber Co., West Lumber Co., West Production Co. and Carter Brothers Lumber Co. have made a deal between themselves to drill a Cockfield sand test in the Samual C. Hirams Survey in the Ace area. The test is to be started within 30 days and will probably be drilled by West Production Co. on a location approximately 1 mile east of the town of Ace.

Polk County

East of the town of Leggett, Polk County, Fain and others have assembled a block of acreage, centering around the William Soloman Survey, and have turned the majority of the acreage to E. A. Thompson, E. W. Smith and others of San Antonio for the drilling of a 4,000-foot test to be started by January 15. It is to be drilled as Smith and Thompson's No. 1 Haynes, 990 feet out of the northwest corner of a 320-acre tract and survey, in the J. Whitmire Survey. Material has been moved in and the test is being rigged up.

Kittrell Field

Humble Oil & Refining Co.'s No. 4 E. T. Shaw, in the Kittrell Field, southern Houston County, originally completed at 2,007 feet for 50 bbls. per hour, and then drilled deeper after it went dead, was recompleted at a total depth of 2,022 feet and flowed 142 bbls. of oil through a three-eighths inch choke four hours and then went dead again. Since the burning well of the company's No. 3 Shaw extinguished itself all the producing wells in the field have gone dead.

The wildcat test of American Liberty Oil Co., No. 1 Graves, located on the Aldine-Bammel prospect in the J. W. Bryan Survey, topped the Cockfield at 6,240 feet and is reaming in shale below 6,395 feet. Based on the Cockfield, it is running a few feet lower than the same company's two dry holes, located south and southwest.

Bosco Field

After being marked up as the deepest test to be drilled on the Gulf Coast, Superior Oil Producing Co.'s No. 1 Augustie Martinez, on the southeast end of the Bosco Field, Acadia and St. Landry Parishes, was abandoned at a total depth of 10,005 feet. It is in Section 35-8s-3e. While the above test defined production on the southeast, its No. 1 Prejan was making its appearance as an extension well. It is bottomed at 8,585 feet, with 7-inch casing cemented at 8,560 feet, and plug was to be drilled the first part of the week. If this test makes a producer it will extend the field approximately 1,000 feet south. It is in Section 34. Location for two tests were made in the field, No. 4 Hermandez, within the proven limits, was located 450 feet east and 330 feet south of the NW cor. Section 34-8s-3e. No. 7 Larcade was 2,467 feet east and 190 feet north of the SW cor. N half NW Section 35-8s-3e.

Humble Oil & Refining Co.'s wildcat test, on the Crowley prospect, Acadia Parish, and being drilled on the American Rice Milling Co. lease, Section 27-

(Continued on Page 73)

Wildcat Operations on Gulf Coast

Week Ending January 12

RACCOON BEND—AUSTIN COUNTY

Humble O. & R. Co.'s No. 3-X Sanders. S.D. 3,220 ft.

Humble's No. 6-X Wilson, 315 ft. at R/A from NW line, 313 ft. at R/A from NE line.
Drlg. shale and lime 2,977 ft.

Humble O. & R. Co.'s No. 9 Sherrod. 7-in. csg. 4,059 ft.; T.D. 4,140 ft.

Humble O. & R. Co.'s No. 11-X Woodley. Drlg. shale 6,262 ft.

Humble O. & R. Co.'s No. 10 Arthur Marten, 315 ft. from SE and 313 ft. from SW line of lease, Wm. C. White Sur. Rigging up.

DANBURY—BRAZORIA COUNTY

Shell Pet. Corp.'s No. 7 Blakely-Winston, 63 deg. 11 min. E, 5,540 ft. N, 26 deg 49 min. W, 200 ft. from SW cor. of Blakely-Winston 560-ac. tract, H.T.&B. Sur.
Drlg. shale 5,899 ft.

Shell Pet. Corp.'s No. 3 Haury, 800 ft. SE of No. 2 in line with No. 2 and No. 1 Blakely-Winston, H.&T.B. Sur. No. 13.
Reaming shale 7,495 ft.

DAMON MOUND—BRAZORIA COUNTY

Gulf Stream, Inc.'s No. 1 Cave Heirs, 160 ft. from N line and 60 ft. from E line of Lot C, Blk. 50, A. Darst Sur.
S.D. 1,512 ft.

Esco's No. 1-D Wisdom, 25 ft. from S and W lines of Blk. D, Lot 5, A. Darst Sur.
S.D. 1,563 ft.

HASTINGS—BRAZORIA COUNTY

Stanolind O. & G. Co.'s No. 1 W. J. Miller, 466 ft. out of SW cor. of the Miller 3,939-ac. tract, in A.C.H.&B. Sur. No. 2, 2,000 ft. E of discovery well.
Rig up.

Stanolind O. & G. Co.'s No. 1 Steve Paul, 476 ft. from the E line and 466 ft. from N line of 160-ac. tract, A.C.H.&B. Sur. No. 2, 2,100 ft. S of discovery well.
Derrick.

MANVEL—BRAZORIA COUNTY

Allison & Richey's No. 2 Gulf Coast Home Co., 347 ft. S, 441 ft. W from NE cor. of Lot 38, H.T.&B. Sur. No. 2-B.
Location.

Bowles & Barsodi's No. 1 Norvell Investment Co. in center of Lot 47, H.&T. Sur., No. 23.
T.D. 5,630 ft.; 7-in. csg. at 5,614 ft.

Cron & Gracey's No. 1 Gubert, Charles O'Donnell Sur. No. 74.
10¾-in. csg. 1,102 ft.; drlg. 1,884 ft. in shale.

Texas Co.'s No. 13 Houston Oil Field Association, 990.5 ft. N, 43 deg. W, 265 ft. N, 42 deg. E of S cor. of Lot No. 11, A.C.H.&B. Sur. No. 91.
T.D. 4,050 ft.; P.B. 3,984 ft.

Texas Co.'s No. 2 O. L. Rash, 990 ft. S, 43 deg. E. 330 ft. S, 42 deg. W of N cor. of lease, Thomas Sproggins Sur.
Drlg. sand 4,590 ft.

Texas Co.'s No. 1 Dolmolin, 330 ft. N, 43 deg. W, 330 ft. S, 42 deg. W, from E cor. of Charles O'Donnell Sur. No. 74, H.T.& B. Sur.
T.D. 5,349 ft.; P.B. to 5,208 ft.

Texas Co.'s No. 1 Joe Grace, 200 ft. S, 200 ft. W of NE cor. of lease, Lot 7, Charles O'Donnell Sur. No. 74.
Drlg. shale and boulders 3,461 ft.

Texas Co.'s No. 15 Houston Oil Field Association, 441.9 ft. W and 247.5 ft. S of NW cor. of Lot 7, A.C.H.&B. Sur.
Drlg. shale and lime 3,934 ft.

Texas Co.'s No. 1 Wray, 330 ft. N, 42 deg. E of W cor. of lease, Thos. Sproggins Sur.
7-in. csg. 5,688 ft.; T.D. 5,704 ft.

Texas Co.'s No. 1 C. P. Dawson, 247 ft. S, 441 ft. W of NE cor. Lot 59, H.T.&B. Sur. No. 23.
Location.

(Continued on Page 74)

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Shortage of New Production Intensifies Interest of Michigan Operators in Field Operations

By PAUL A. ELLIOTT
Staff Correspondent, Michigan Fields

MUSKEGON, Mich., Jan. 14.—Concerned over an order issued two weeks ago by Secretary of the Interior Harold L. Ickes, oil administrator, limiting to 28 the number of wells to be drilled in the Ogemaw County Pool for 1935, six Ogemaw operators last week hastened to take out 16 of the unusually high total of 21 permits to drill issued by the oil and gas division of the Michigan Conservation Commission between January 2 and 9.

After the first rush, nowever, excitement over the possible serious curtailment of the order was quieted in an explanation the limitation applied only to an area about Alvin C. Webber's No. 1 Wilcox well in Section 34, West Branch Township, the discovery upper Traverse well brought in July 14, 1933.

Two of the State's five new oil producers completed during the past week are in West Branch Township of Ogemaw County. Denver and Isabella Townships of Isabella County reported two more small oil wells also in newly developing semiwildcat areas, while an interesting east extension test in Porter Township, Midland County, was the largest of the new completions. Three dry holes and an abandoned location completed the record for the first full week of the new year with only 710 bbls. initial of new oil to bolster up an already declining potential in the face of an increasing crude market.

As a result of this situation, Michigan operators are watching with added interest drilling projects in several areas where high hopes are held for opening one or more new major pools for the State. Two leading areas in this respect as the new year opened were in the vicinity of the Beaverton Township, Gladwin County wildcat, and the Atha Oil Co.'s No. 1 Moran in Mount Haley Township, Midland County, about 5 miles east of the Porter Pool.

Rigs have been moved in for three tests in Beaverton and Tobacco Townships of Gladwin County and for tests in Warren Township, Midland County, and Adams Township, Arenac County, which are expected to help outline the Beaverton Pool. One new test is drilling, another rigging and a third location has been announced for Mount Haley Township, the other more promising area.

Cause of the long delay in starting further development as the result of the Beaverton wildcat, M. F. Whitehill's No. 1 Omer Kintner brought in nearly three months ago in Section 11, Beaverton Township, was revealed during the past week in the filing of several suits to clear title. Top leasing and the possibility early lumber owners had reserved the mineral rights many years ago are the causes of present title difficulties. It will be up to the courts now to decide whether Mr. Whitehill and his associates of Washington, Pa., shall maintain their rights to the discovery well and oil rights on other leases in the vicinity. In the meantime, however, Mr. Whitehill is proceeding now to drill a second test on the Spicer lease adjoining the Kintner in Section 11.

Midland County

Largest new well of the past week was the Rex Oil & Gas Co.'s No. 1 Frank Howland, NW SW NW Section 23-13n-1w, Porter Township, Midland County, which slightly extended the Porter Pool in the direction of the Mount Haley-Midland wildcat 5 miles east. Some operators believe the two areas eventually will be joined. It made an estimated 500 bbls. a day topping the Dundee limestone at 3,376 feet and drilling to 3,418 feet. It will be acid treated.

Twenty-five other tests are as yet uncompleted in Porter Township where the McClanahan Oil Co.'s No. 2 Eliza Breu, NE SW SE Section 20, is nearest the Dundee although fishing for tools at 2,934 feet where they were dropped in a recent rig fire.

Mon-Mar Oil Corp.'s No. 1 Emmett Scott, SE SW NE Section 8-14n-2w, Greendale Township, Midland County, was cased and ready to drill in as the week ended.

Two other Midland County tests, one a rank wildcat in Ingersoll Township, and the other in Jasper Township, were dry. Howard F. Patterson's No. 1 David Haskins, NW NW SW Section 26-13n-2e, Ingersoll Township, struck water 107 feet in the Dundee. Started about a year ago, it had been shut down until recently on its location about 8 miles east of the Atha-Moran test.

George G. Hanners' No. 1 Charles W. and Harmon Hoyt, NE NE NE Section 24-13n-2w, Jasper Township, also was dry in the Dundee after topping the limestone at 3,447 feet and drilling to 3,471 feet.

Howard L. Foster and J. V. Wicklund are rigging up for their No. 1 Carrie Neal, SE NE SE Section 13-11n-2w, Warren Township, Midland County, considered a test of the Beaverton area.

Other Midland County activity last week included one drilling, one rigging and a location in Mount Haley Township, and one shut down in Mills Township.

Isabella County

Pure Oil Co. brought in its No. 1 State, NW NE NE Section 33-15n-3w, Denver Township, Isabella County, as a 150-bbl. producer and east offset to the McClanahan Oil Co.'s No. 1 Maria T. Sweeney in a field opened by the McClanahan company with No. 1 Demski several months ago. The Pure well was drilled to a total depth of 3,628 feet.

McClanahan Oil Co.'s No. 1 B. Wonsey, also in Section 33, struck a show of oil and gas in the Dundee but will be treated with acid before completion.

Two other Denver tests nearing completion as the week ended were the Jackson-Meyer Syndicate's No. 1 Hughes, SW SE NE Section 19, and Gordon Oil Co.'s No. 1 John Demski, SW NW SE Section 28.

Morris Oil & Gas Corp.'s No. 1 F. and C. Epple, SE NE SE Section 19, also was plugging back from a total depth of 3,659 feet for acid treatment in the Dundee.

The Wittmer Co. brought in its No. 1 Malcolm McCloud, W half SE Section 12-15n-4w, Isabella Township, in another newly developing area, with a natural potential of 10 to 15 bbls. a day, probably to be increased by acid treatment. Same company's No. 1 Durl Phillips, C W half NE NW Section 13, was nearing the Dundee though delayed by trouble with tools at 3,400 feet.

Stewart-Atha's No. 1 John A. McDonald, C NW SE Section 25-16n-4w, Vernon Township, and Pen-Yan Investment Co.'s No. 1 A. E. Ackerman, SW NW NW Section 12, same township, were nearing Michigan gas sands.

Youman-Dalton Oil & Gas Co.'s No. 1 Charles Wheelock, C SW NE Section 31-15n-6w, Sherman Township, also may drill into the Michigan pay sands this week. One other Sherman test was drilling, one driving pipe and one shut down.

Michigan Gas & Oil Corp.'s No. 1 Martin Hanson, SE SE SE Section 20-13n-6w, Rolland Township, is an abandoned location.

Pure Oil Co.'s No. 1 Lucy Baker resumed drilling after being shut down and was nearing the Michigan Stray sand on its location, SW NW SE Section 15-13n-5w, Fremont Township, Isabella County.

One test was drilling in Chippewa Township, three were spudding in Broomfield and two shut down to complete the active record of the county.

Two central and east central Michigan wildcats were dry, including the Ithaca Oil & Gas Co.'s No. 1 Andrew Thum, NW SE SE Section 19-9n-1w, Elba Township, Gratiot County, plugged back to test the gas after failure in lower oil formations, and Ray Bier, trustee's No. 1 Albert Stepanski and wife, NE SE SW Section 14-15n-4e, Kawkawlin Township, Bay County, in which Dundee was topped at 2,961 feet and drilling suspended at 3,205 feet where it was plugged and abandoned.

Ogemaw County

Two Ogemaw County tests previously drilled into the Dundee pay sands were reported making 40 and 10 bbls. a day, respectively, the former after acid treatment and the latter swabbing.

Muskegon Oil Corp.'s No. 1 H. Wilson, NW SE NE Section 24-22-1e, Ogemaw Township and County, made 30 bbls. naturally, 60 bbls. after acid treatment and settled down to 40 bbls. a day.

Weber Oil Co.'s No. 1 L. Doran, SE SW SE Section 27-22n-2e, West Branch Township, topped the Dundee limestone at 2,504 feet and swabbed 10 bbls. a day after drilling to 2,674 feet.

Twenty-three other tests are active in the county in all stages of development from location to near completion.

T. F. Caldwell's No. 2 Ogemaw County Fair Grounds, SW NW SE Section 19, West Branch Township, was shut down in the Dundee formation at 2,572 feet waiting for acid treatment.

Two others were drilling in the Dundee or nearing completion. They were: W. J. Sovereign's No. 1 Golf Club, SE SW SW Section 20, shut down on top of the Dundee and M. J. Ingold's No. 1 Hobohm and Wheeler, NE NW NW Section 29.

Drilling of the Howell Township, Livingston County wildcat which recently struck a flow of about 200,000 feet of gas in the Sylvania is being continued in secret. The well is the McPherson estate's No. 1 of the Talbot Oil Co. fishing at 4,800 feet. Trenton is expected at 5,000 to 5,300 feet.

Ten tests were active in six townships of Mecosta County although none was near completion. Five Montcalm County tests also are active.

Western Michigan

Bear Creek Oil & Gas Development Co., of Holland, continued drilling its No. 1 John Fors, NE NE SE Section 29-3n-14w, Heath Township, Allegan

(Continued on Page 73)

Bureau of Mines Report on Petroleum and Petroleum Products for November

Crude Petroleum—According to reports received by the Bureau of Mines, Department of the Interior, the production of crude petroleum in the United States during November totaled 72,463,000 bbls. This total represents a daily average output of 2,415,000 bbls., which is 62,000 bbls. below the average in October.

The trend of crude production was influenced chiefly by the activities of the Federal Tender Board in East Texas. The flow of oil from that field into interstate commerce was almost stopped by the board with the result that the daily average production of the East Texas Field declined to 445,000 bbls. from 499,000 bbls. in October. The number of oil wells completed declined and the initial of the new wells was lower but, because few new wells are allowed to produce to capacity, the influence of these factors on actual production was of minor importance. Daily average production in the majority of the states declined in November, the most notable exception being California.

The desire of many refiners to replenish their gasoline inventories was the principal reason underlying a gain in daily average crude runs to stills in November, usually a month of declining consumption; the increase in refinery demand coupled with the decrease in production resulted in a larger withdrawal from stock. The total decline in crude stocks was 5,250,000 bbls., the heaviest withdrawal in many months.

Refined Products—The daily average production of motor fuel again showed little change, an increase in crude runs being balanced by a small decrease in yield. Of more than usual interest was a material gain in the relative proportion of natural gasoline; in November natural gasoline comprised 9.8 per cent of the refinery output, this being the highest ratio in nearly four years. The indicated domestic demand for motor fuel was 34,839,000 bbls., a daily average of 1,161,000 bbls. This represents an increase of 15 per cent over November, 1933, and constitutes a record demand for that particular month. The abnormal increase in November following one of similar proportions in October, further accentuates the difference between refinery deliveries, part of which may go to unreported storage, and actual consumption. Stocks of finished gasoline declined 1,285,000 bbls. during the month totaling 43,802,000 bbls. on November 30.

According to the Bureau of Labor Statistics, the price index for petroleum products during November, 1934, was 50.5, compared with 50.4 in October and 51.6 in November, 1933. Trade journal quotations of a representative grade of gasoline at refineries for the same three months were 3.75, 3.57 and 5.13 cents respectively.

The refinery data of this report were compiled from refineries with aggregate daily recorded crude oil capacity of 3,559,000 bbls. These refineries operated during November at 69 per cent of their capacity, given above, compared with a ratio of 67 per cent in October.

Potential Tests Send Oklahoma Production Up to 513,175 Barrels Per Day; Big New Wells

By JAMES McINTYRE

Potential tests taken last week in Oklahoma drove production up to 513,175 bbls. per day, as against 407,000 bbls. per day the week before. Oklahoma City climbed to 188,225 bbls. per day and Seminole-St. Louis production jumped to 89,400 bbls.

Some of the potential tests showed interesting results. In the Wilcox sand zone in Section 31-7-8, Seminole County, opened in 1934 by Jarvis & Holm and others, records of seven wells averaged 925 bbls. per well for a six-hour flow, or a potential average of 3,700 bbls. per day per well. These were Empire Oil & Refining Co.'s No. 1, SW SE NE, 778 bbls.; Stanolind Oil & Gas Co.'s No. 1, NW NE SE, 969 bbls.; same company's No. 1, NE NW SE, 686 bbls.; Mid-Continent Petroleum Corp.'s No. 1, NE SW SE, 959 bbls.; Slick-Urschel, Inc.'s No. 1, C SE NW SE, 940 bbls.; same operators in C SW NW SE, 1,557 bbls.; same operators in SW NE SE, 587 bbls. All the wells are in Section 31 and all the tests were open on flow of six hours duration.

Estimated Production

Estimated production by pools in Oklahoma for the week ending January 12 and for the preceding week follows:

	Barrels	
	Jan. 12	Jan. 5
Allen	8,275	6,125
Asher-West Asher	1,475	1,450
Burbank	9,100	9,100
South Burbank	9,500	9,500
Balance of Osage	27,500	27,500
Blackwell	4,750	4,750
Bristow-Slick	9,650	9,650
Crescent	4,600	5,525
Cromwell	4,500	4,500
Cushing-Shamrock	13,300	13,250
Duncan district	4,100	4,100
Chandler district	6,150	6,150
Fish	6,950	6,425
Fitts	3,350	2,000
Gray	1,775	850
Graham	3,400	3,400
Healdton	9,200	9,200
Hewitt	4,800	4,800
Holdenville	2,200	2,225
Keokuk	1,975	1,200
Konawa	1,975	1,600
Lucien	7,150	7,300
Marshall-Lovell	1,000	1,000
Oklahoma City	188,725	110,675
Papoose	1,250	1,250
Sasakwa and Townsite	2,250	2,150
Sholem-Alechem	4,100	4,100
Seminole Field:		
Bowlegs	9,400	8,500
Carr City	5,825	3,000
Earlsboro	9,050	7,125
East Earlsboro	8,825	6,875
South Earlsboro	1,100	950
Little River	12,925	8,850
East Little River	650	525
Maud	1,525	1,200
Mission	2,725	1,900
Seminole	10,025	7,350
East Seminole	1,050	1,000
Searight	3,250	2,550
Total Seminole	66,350	49,825
St. Louis-Pearson	23,050	17,100
Tatums	6,300	5,900
Tonkawa-Garber-Thomas	6,050	6,100
Wewoka	4,400	4,400
Yale-Jennings	4,825	4,800
Other pools	59,200	59,100
Total Oklahoma	513,175	407,000

World's Deepest Oil Well

Denver Producing & Refining Co.'s deep well in Caddo County, No. 1 A-dah Noe in Section 34-10-10w, Caddo County, has been cleaned out to 10,000 feet and was flowing by heads 75 bbls. of oil per day from sand topped at 9,900 feet. The owners estimate it can be made into a 250-bbl. producer. It is the deepest oil well in the world.

Sinclair Oil & Gas Co. and Gypsy Oil Co.'s No. 1 School Land, SE cor. Section 36-17-1w, Logan County, which has dolomite at 5,355-60 feet, total depth, was opened up Friday and produced 142 bbls. in 12 minutes and then quit. It was shut in again.

In the Boley or Dill Pool, Seminole County, Carter Oil Co.'s No. 1 King, C NE SW Section 2-11-8, had Hunton lime at 3,918-30 feet, which was acidized. It produced 600 bbls. in two and one-half hours, cutting 6 per cent. It made 70 bbls. the last half hour.

In the Fitts Pool

In the Fitts Pool, where a number of completions were recorded in the past week, and which are listed below in the completion record, two wells were brought in which are not yet completions. Carter Oil Co.'s No. 2 Hardin, C NW NE SW Section 30-2-7, had Viola lime at 3,675 feet, set 8-inch at 3,687 feet, topped Bromide at 3,950 feet and was 10 feet in. The well swabbed 130 bbls. in 16 hours from Viola lime. Same company's No. 2 C. L. Richards, C NW NW SE Section 30-2-7, found Bromide at 3,995 feet, first sand at 4,105 feet and second sand at 4,185 feet and McLish at 4,204-14 feet. It flowed 1,050 bbls. in four hours through 7-inch casing.

Lynch & Sledge's wildcat, No. 1 Thompson, SW NE E Section 1-1-7, southeast of the Fitts Pool, had Viola lime at 4,241 feet and was drilling at 4,246 feet.

Paramount Petroleum Co.'s wildcat, about 6 miles southeast of the Fitts Pool, No. 1 Graham, C SW SE SW Section 13-1-7, Pontotoc County, had Mayes lime at 2,342 feet and Hunton at 2,498 feet. A saturated core was taken from 2,500 to 2,507 feet.

Stanolind Oil & Gas Co. and others' No. 3 DeBord, SW NW SW Section 27-22-2w, in the Polo Pool, Noble County, topped Wilcox sand at 4,850 feet and flowed 818 bbls. in seven hours at 4,866 feet. It was flowing an average of 84 bbls. an hour while drilling at 4,882 feet.

Sinclair Prairie Oil Co.'s No. 1 Hoyt, NW SW NE Section 5-14-3, Lincoln County, had Wilcox sand at 5,062-79 feet and 5,106-13 feet. It had salt water in the bottom of the hole and plugged back to 5,110 feet. The well swabbed 211 bbls. in 24 hours with no water showing.

Stanolind Oil & Gas Co.'s No. 1, C NE NE SE Section 31-11-4, Pottawatomie County, got salt water at 5,470 feet, in Wilcox sand topped at 5,470 feet. It was drilled to 5,562 feet and was being plugged back to 4,386 feet to test Earlsboro sand.

Turman Oil Co.'s No. 1, C SW SW NW Section 29-8-4, Pottawatomie County, flowed 1,500 bbls. in 24 hours from Hunton lime at 4,362-87 feet. It was a potential test.

Good Well in South Burbank

Mead Oil Co. brought in a big well in the South Burbank Pool in Osage County, No. 6 in the C NW NW SW Section 10-25-6. It had Bartlesville sand at 2,731 feet, oil at 2,760 feet, and was bottomed at 2,795 feet, still in sand. The well flowed 5,177 bbls. of oil in 48 hours.

Community Test in Cleveland

Notwithstanding a few deep wildcat dry holes have been drilled in Cleveland County, an even dozen of operators have joined in a unit operation which will be drilled by Sinclair Prairie Oil Co. It will be known as No. 1 Turner, SE NW SE Section 21-10-2w, east of the town of Moore. The Carter, Continental, Cromwell-Franklin, Gypsy, Mid-Continent, Papoose, Phillips, Standard of Kansas, Twin State and Wirt Franklin companies are associated with Sinclair Prairie in the test and the acreage, which includes all of Section 21, and the NE and NW of Section 28, all in Township 10-2w. A 4,706-foot dry hole was drilled in Section 22 by the Franklin and Cromwell interests before the Oklahoma City Pool was opened.

Marathon Oil Co.'s wildcat in Noble County, No. 1 Gilbert, NE NE NE Section 24-22-2e, close to the Pawnee County line, had a saturated sand from 4,411-80 feet, which was believed to be Wilcox. It was not solid throughout the section but had a promising saturation. It was planned to set pipe at 4,474 feet where some hard lime was found.

Southeastern Oklahoma

Several years ago a test was drilled to 2,900 feet in SE SW SW Section 35-3s-18e, east of Antlers in Pushmataha County, by Whitehead and others. It was abandoned. William Ungerman and others will deepen this test. They have cleaned out to 2,790 feet and set 8¼-inch pipe at that point. The new operators say they will drill to 6,000 feet if necessary to make a thorough test. They have a 5,000-acre block, which is practically the old lease block reassembled. The new owners paid from 50 cents to $2 per acre. Pushmataha and Choctaw Counties are both enjoying a leasing campaign. Several blocks have been assembled in the latter county. Roy Bocock and others are drilling around 300 feet in a test in Section 14-5s-16e. Over east in McCurtain County, Scrivener & Abernathy, Texas operators, are drilling in NE SW SW Section 34-6s-21e, on a large block. The hole was below 800 feet.

Jack Shaffer will drill a test, No. 1 Watson, C NW NE Section 15-15-4w, in Logan County, on a block assembled by Winemiller & Newman of Tulsa. Companies interested in the block and their percentage acreage holdings include: Stanolind, 11 per cent; Amerada, 11 per cent; Sinclair Prairie, 19 per cent; Gypsy Oil, 5½ per cent; Shaffer, 5½ per cent; Shell, 17 per cent; Marathon Oil, 9 per cent; Texas Co. and Phillips Petroleum, 1 per cent each.

Osage County

Murry Ringold's No. 7 Riverbed, NW NE NE SW Section 30-21-9, Osage City Pool, had sand 319-33 feet, total depth, shot with 60 quarts, pumped 75 bbls., completed.

W. C. Norris' No. 6, SE SW NE SE Section 29-21-11, Edgewood Pool, had Burgess sand 1,934-40 feet, total depth, being completed for 35 bbls. on pump.

Oklahoma Power & Water Co.'s No. 138, NW SW Section 27-20-10w, Keystone Pool, was completed for 7,000,000 feet of gas in Burgess sand found from 2,380-81 feet, total depth.

First reports for Osage County for the week are as follows: Barnsdall Oil Corp.'s No. 11, NE SW SE NW Section 30-21-9, machine; Texas Co.'s No. 2, SE NE SW Section 17-21-10, (old well drilled deeper), total depth 2,019 feet, cleaning out; W. C. Norris' No. 7, NE SE NW SE Section 29-21-11, machine.

Kay County

Carter Oil Co.'s wildcat test, No. 1

Wildcat Operations in Oklahoma

Week Ending January 12

NORTHERN OKLAHOMA

BECKHAM COUNTY

Fred Coogan et al's No. 1 Shelton, SW cor. Sec. 33-10-25w.
Spudding.

CADDO COUNTY

H. W. Lee et al's No. 1 Stacey Ferrell, SW NE NE Sec. 3-6-13w; (2,000-ft. test).
Drlg. 1,210 ft.

Denver Prod. & Ref. Co.'s No. 1 Noe, NW SW SW Sec. 34-10-10w.
T.D. 11,230 ft.; C.O. to 10,000 ft.; flowing by heads estimated 50 bbls. oil in 24 hrs.

COAL COUNTY

J. D. Petty Oil Co.'s No. 1 McMillan, SW NW NE Sec. 16-1s-8.
Sandy shale at 1,000-34 ft.; S.D.

GARVIN COUNTY

Anderson & Kerr's No. 1 Riley, SE SE NW Sec. 2-4-1w (5,800-ft. test).
Pipe set at 128 ft.

Charles Carter and W. S. Key, Inc.'s No. 1 Wood, C NW SW SE Sec. 5-4-3e.
Set surface pipe.

National Prod. Co.'s No. 1 Littrell, NE NE NE Sec. 31-2-3w.
S.D. 1,044 ft.

GRADY COUNTY

Carter Oil Co. and Magnolia Pet. Co.'s No. 1 Harrison C-34, C NW NW Sec. 28-3-5w.
Drlg. 5,600 ft.

GRANT COUNTY

Helmerich & Payne's No. 1 Crouse, C NE SW Sec. 29-25-3w.
Drlg. 4,985 ft.

HUGHES COUNTY

Dandridge & Crane's No. 1 Mead, NW NW NE Sec. 17-5-9.
T.D. 270 ft.; S.D. for pipe.

Freeman et al's No. 1 Kite, NW NW NE Sec. 8-6-10.
Sand 596-98 ft.; show oil; S.D. for pipe.

Meyers et al's No. 1 Scott, NE SE NW Sec. 23-6-8; (1,000-ft. test).
T.D. 790-810 ft.; dry and abd.

Turner et al's No. 1 Williams, SW cor. Sec. 25-7-10.
Rig.

KAY COUNTY

Harris & Haun's No. 1 Schuessler, C NW SW Sec. 3-28-2.
Running 10-in. csg. at 1,478 ft.

Bay Oil Co.'s No. 1 Holden, SW SW SE Sec. 14-28-3.
Chat 3,136-73 ft.; swabbed 125 bbls.; P.B. to sand at 2,980-92 ft.; shot with 80 qts.; Swabbed 153 bbls.; testing.

Carter Oil Co.'s No. 1 Fowler, C NE Sec. 12-27-1e.
Sand 3,564-65 ft.; showing oil; S 3,566-3,625 ft; est. 10 bbls. oil; Chat 3,715-52 ft.; dry and abd.

Lancer Oil Corp.'s No. 1 Hugo, SE NW NW Sec. 22-28-5.
Location.

S. R. McCorkle et al's No. 1 Smith, SW cor. Sec. 6-26-4.
Drlg. 170 ft.

KINGFISHER COUNTY

Black Gold Oil Co.'s No. 1 Cole, C SW NE Sec. 24-18-5w.
Drlg. 3,540 ft.

LINCOLN COUNTY

Tom Bennett et al's No. 1 Bolby, C SE SW Sec. 27-12-2.
Cored 5,065-81 ft.; S.D. for csg.

Derrickson and Reserve Pet. Co.'s No. 1 Law, SE SW NE Sec. 25-14-3.
Rig on ground.

Chester L. Carlock's No. 1 Young, C N½ NW NW Sec. 23-15-5.
Rig.

Sinclair Prairie Oil Co.'s No. 1 Hoyt, NW SW NE Sec. 5-14-3.
Wilcox sand 5,062-71 ft.; flowed 200 bbls. in 24 hrs.; second Wilcox sand 5,106-13 ft.; T.D. wtr.; P.B. to 5,084 ft.; swbd. 80 bbls. oil in 10 hrs.; to shoot.

Sinclair Prairie Oil Co.'s No. 1 Boland, SW cor. Sec. 25-12-3.
Second Wilcox 5,536-61 ft.; H.F.W.

LOGAN COUNTY

Helmerich-Payne et al's No. 1 Sturgis, SE NW Sec. 1-15-2w.
Drlg. 4,910 ft.

Shell Pet. Corp. et al's No. 1 Hirzel, SE SW SW Sec. 7-16-2w.
Drlg. 3,530 ft.

Sinclair Prairie Oil Co. et al's No. 1 Dunbar, Sec. 25-15-4w.
Mississippi lime 6,228 ft.; drlg. 6,365 ft.

Sinclair Prairie Oil Co. et al's No. 1 School Land, SE cor. Sec. 36-17-1w.
Hunton 5,040 ft.; Viola 5,200 ft.; Simpson dense 5,255-60 ft., T.D.; one flow of 75 bbls. of oil, then quit flowing.

NOBLE COUNTY

Marathon Oil Co.'s No. 1 Gilbert, NE cor. Sec. 24-22-2.
Wilcox sand 4,449 ft.; T.D. 4,480 ft.; to core ahead.

Sinclair Prairie Oil Co.'s No. 1 Cawood, C SW NW Sec. 27-20-2w.
Viola 4,970 ft.; set 7-in. csg. 4,930 ft.; T.D. 4,983 ft.; flowed 907 bbls. of 41 grav. oil in 24 hrs. by heads; comp.

(Continued on Page 53)

Fowler, C NE Section 12-27-1, was dry and abandoned at 3,757 feet in Chat formation topped at 3,715 feet.

A. W. Lindley's No. 1-A Symons, SE NE NW Section 11-27-3, Mervine Pool, had a hole full of water in the Newkirk sand 901-26 feet and was dry and abandoned at 950 feet, total depth.

Oklahoma County

Location has been staked for a wildcat test in Oklahoma County, Anderson & Kerr Drilling Co. and others' No. 1 Linn, SW NW Section 17-14-2w.

Lincoln County

The Texas Co.'s No. 1 Hoover, NE SE Section 33-14-4, Gessman Pool, was completed for 420 bbls. of oil in 24 hours flowing through casing. Cleveland sand 3,050-69 feet, total depth.

The Texas Co.'s No. 2 Gessman, SW SE NE Section 33-14-4, location.

Hughes County

Myers and others' No. 1 Scott, NE SE NW Section 23-6-8, was abandoned at 810 feet, total depth.

The Texas Co.'s No. 4 Brown, NE SW NW Section 10-9-5, Earlsboro Pool, which was an old well drilled deeper, logged Wilcox sand at 4,480-97 feet, total depth. It was dry and abandoned.

Amerada Petroleum Corp. and Stanolind Oil & Gas Co.'s No. 2 Block, SW NE Section 27-8-8, East Wewoka Pool, was abandoned at a total depth of 4,200 feet, 14 feet in Wilcox sand topped at 4,186 feet.

Empire Oil & Refining Co.'s No. 2 Davis-"B," S NE Section 30-7-8, Fish Pool, was completed for 751 bbls. of oil in 24 hours in the Wapanucka sand logged at 2,965-3,021 feet, total depth.

First reports and new work in Seminole County for the past week were as follows: Carter Oil Co. and others' No. 1 Nichols, C N half SW NW Section 2-10-6, location; Carter Oil Co. and others' No. 2 Community I.T.I.O., C E half NW NW Section 11-9-6, spudding; Magnolia Petroleum Corp.'s No. 6 Reed, SW SE SE Section 30-7-8 (twin), location; Empire Oil & Refining Co.'s No. 5 Myers, SE NE NE Section 31-7-8, spudding; Mid-Continent Petroleum Corp.'s No. 3 Harjoche, NW SW SE Section 31-7-8, rig; Crabtree and others' No. 1 Chandler, NE SE SW Section 4-5-6, rigging up cable tools.

Seminole County

Carter Oil Co. and others' No. 1 Twinam, C S half SW NW Section 35-11-6, Keokuk Pool, flowed 205 bbls. of oil through 2½-inch tubing in 24 hours, production coming from Misener sand logged at 4,183-89 feet, total depth. It was completed.

Pottawatomie County

Minnehoma Oil Co.'s No. 1 Hill, C SE NE Section 3-8-4, Grisso Pool, was dry and abandoned in the Viola lime at 4,301 feet, total depth.

Phillips Petroleum Co.'s No. 1 Bayliss, C NW SE Section 3-8-4, was completed in Hunton lime for 218 bbls. of oil and 110 bbls. of water, producing horizon being logged at 4,061 to 4,070 feet, total depth.

Hunton Oil Co.'s No. 1 Walker, SE SW Section 7-7-4, St. Louis Pool; Hunton Oil Co.'s No. 1 Willis, SE SW SE Section 7-7-4; Hunton Oil Co.'s No. 1 Wilson, NE SW Section 7-7-4, and Hunton Oil Co.'s No. 1 Cook, NW cor. Section 8-7-4, are all abandoned locations.

Bud Smith's No. 1-A Woods, SW NW SW Section 31-7-5, St. Louis Pool, was dry and abandoned at 4,256 feet, total depth, 30 feet in dolomite lime topped at 4,226 feet. At 4,251 feet, it pumped 25 bbls. of oil and 30 bbls. of water and at 4,256 feet the hole filled 1,300 feet with water and 200 feet with oil.

Pottawatomie County got three new locations for the week as follows: Westgate Oil Co.'s No. 1 Davis, SW SE NE Section 18-7-5, location; Commercial Drilling Co. and Texas Co.'s No. 1 Ray, NE SE NE Section 2-6-4, cellar; Huckelberry Drilling Co.'s No. 1 Gray, SE SW Section 25-6-4, rig on ground.

Pontotoc County

In the Fitts Pool, Pontotoc County, Blackstock and others' No. 2 Craddock-"B," SW NE SE Section 25-2-6, topped Bromide lime at 4,065 feet, getting first sand from 4,175-95 feet, and second sand 4,233-88 feet, stopped at 4,295 feet in McLish lime. It was completed for 1,410 bbls. of oil in two hours flowing through casing and tubing with an estimated 3,000,000 feet of gas.

Carter Oil Co.'s No. 1 Lucy Brown, NW SE SE Section 25-2-6, was washed in through 2½-inch tubing and gauged 720 bbls. of oil the first hour. It was completed at a total depth of 4,300 feet. 30 feet in McLish lime.

Magnolia Petroleum Co.'s No. 3 Tom Norris, NE NW SE Section 25-2-6, was a completed well, gauging 1,403 bbls. of oil in two hours through casing with an estimated 5,000,000 feet of gas. First sand was 4,165-95 feet and second sand 4,245-65 feet. Total depth was 4,287 feet in McLish lime.

E. H. Moore and others' No. 3 Wirick, SE NE SW Section 29-2-7, had first Bromide sand 4,002-18 feet and second Bromide sand 4,080-4,120 feet, stopping in the McLish lime at 4,218 feet. It was completed for 1,469 bbls. of oil in 16½ hours flowing through tubing.

Blackstock and others' No. 4 Hardin-"D," twin to a gas well in the SE NW Section 30-2-7, was completed for 1,653 bbls. of oil in three hours flowing through casing. It had an estimated 7,000,000 feet of gas and production was coming from the first and second Bromide sands logged at 4,210 feet and 4,255 feet respectively. Total depth was 4,282 feet in McLish lime.

Carter Oil Co.'s No. 3 D. Hardin, NE SW Section 30-2-7, twin to a gas well, was completed, flowing 1,327 bbls. in four hours through casing. Bromide sand top was not determined and the well quit at 4,170 feet, total depth, 5 feet in McLish lime.

All new development in Pontotoc County was in the Fitts Pool. The list follows: Stanolind Oil & Gas Co.'s No. 6 Norris Royalty, SW SE Section 25-2-6, location; Burke-Greis Oil Co.'s No. 1 Chambers, NE NW Section 36-2-6, cellar; Carter Oil Co.'s No. 4 Hardin, SW NE SW Section 30-2-7, location; Carter Oil Co.'s No. 5 Hardin, SE NE SW Section 30-2-7, location; Carter Oil Co.'s No. 5 Richards, SW NW SE Section 30-2-7, location; Carter Oil Co.'s No. 6 Richards, SE NW SE Section 30-2-7, location; Carter Oil Co.'s No. 7 Richards, SW NE SE Section 30-2-7, location; Stanolind Oil & Gas Co.'s No. 7 Hardin, SE NW SW (twin to gas well), Section 30-2-7, location.

Atoka County

L. A. Fitts' No. 1 Blankenship, NE NW Section 19-3s-10, was dry and abandoned at 651 feet, total depth. A small show of gas was encountered in sand at 310-21 feet.

Carter County

F. W. Merrick, Inc.'s No. 11 Schermerhorn, SW SE NW SW Section 5-4s-3w, Healdton Pool, logged sand at 1,106-20 feet and was completed for 15 bbls. of oil and 5 bbls. of water after a 20-quart shot. It has been plugged back from 1,190 feet, total depth.

Schermerhorn Oil Co.'s No. 32 fee, NW SW Section 5-4s-3w, had sand showing oil at 1,015-95 feet and was dry and abandoned at 1,533 feet, total depth.

George E. Keith's No. 2 Harmon, NE SW NW SW Section 28-1s-2w, East Tatums, was completed for 24 bbls. of oil flowing through tubing with 500,000 feet of gas. Production was coming from shallow sand logged at 515-35 feet, total depth.

C. W. Tomlinson's No. 1 Eaves, SW SE Section 30-1s-2w, Tatums Pool, was abandoned at 1,955 feet, total depth after testing oil showing in sand encountered from 1,411-50 feet.

L. J. Woodruff's No. 1 Brady, NW SW SW Section 32-1s-2w, was completed for 15 bbls. of oil and 30 bbls. of water at a total depth of 2,317 feet. Sands showing oil were encountered from 1,793 feet to 2,277 feet.

Carter County first reports are as follows: Coline Oil Co.'s No. 10 Willis, SE NE Section 6-4s-3w (old well drilled deeper), drilling 1,220 feet; Skelly Oil Co.'s No. 4 Moore, NE SE NW Section 17-2s-2w, slush pits; Eggleston and others' No. 1-A Dillingham, NE SE SE Section 8-1s-2w, drilling 20 feet.

Comanche County

In Comanche County, H. W. Baker's No. 1 Miller, SE SW SE NE Section 22-2-13w, had spudded 50 feet and shut down.

Garvin County

J. C. Bussey had a machine in on location for his No. 1 Mauldin, NE cor. Section 20-1-3w, Robberson Pool.

Grady County

Western Oil, Inc. has location staked for its No. 1 Stover, C NW NW SW Section 16-1-8w.

Jackson County

Gypsy Oil Co. completed No. 1-A Kelly, NE cor. Section 10-1-20w, Kelly Pool, Jackson County, a core drilled test to 1,700 feet, total depth. It was plugged back to 1,424 feet and completed for 370,000 feet of gas in sands logged from 1,102-70 feet.

Gypsy Oil Co.'s No. 1-B Kelly, NE

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cor. Section 10-1-20w, a twin well, was completed in sand logged at 1,404-36 feet, for 247 bbls. of oil, flowing and swabbing its production. Total depth was 1,441 feet.

First reports in Jackson County for the week are as follows: Associated Oil Co.'s No. 1 Harrell, NE SE Section 13-1s-21w, spudded and shut down; D. Scheig's No. 1 James, NE cor. Section 23-1-20w, moving in machine.

Marshall County

Centrop Oil Corp.'s No. 6 Burge, SW NE SE Section 25-7s-5, was completed in sand 544-61 feet, total depth, for 10 bbls. of oil.

Roy A. Godfrey's No. 8 Burge, SE NE SW SE Section 25-7s-5, logged sand 538-54 feet, getting water with a small showing of oil and it was abandoned at a total depth of 556 feet.

Roy A. Godfrey's No. 2 Cox, SW SE NE Section 26-7s-5, Enos Pool, was dry and abandoned at 431 feet, total depth.

Charles Newsome's No. 4 fee, NE SW NE SE Section 36-7s-5, had gas sand 485-504 feet, and it was completed at a depth of 506 feet for 2,000,000 feet of gas.

First reports in Marshall County were as follows: G. L. Priest's No. 2 Cope-Sublett, SW NW SE NE Section 1-8s-5, machine; Roy A. Godfrey's No. 9 Burge, SE SW SE Section 25-7s-5, drilling 120 feet; F. H. E. Oil Co.'s No. 2 Snell, NW cor. Section 31-7s-6, machine.

Jefferson County

J. D. Wakefields and others' No. 1 Kelly, NW SE Section 1-5s-8w, Jefferson County wildcat, was dry and abandoned at 1,003 feet, total depth.

E. S. Bonner's No. 1 Burgess, NE SE Section 12-5s-8w, Jefferson County wild-

(Continued on Page 73)

Wildcat Operations in Oklahoma

(Continued from Page 53)

OKFUSKEE COUNTY

Amerada Pet. Corp.'s No. 1 Jaynes, NW NW SW Sec. 26-10-10.
Sand 2,040-50 ft.; show gas.
Mid-Continent Pet. Corp.'s No. 1 Haney, SW SE NE Sec. 24-12-8.
Drlg. 2,550 ft.

OKLAHOMA COUNTY

Anderson & Kerr et al's No. 1 Linn, SW NW Sec. 17-14-2w.
Location.
R. Carl Larkin's No. 1 Brobine, NW NW NE Sec. 33-13-5w.
Rig and pits.
J. C. Shaffer et al's No. 1 Bullard, SW cor. Sec. 13-13-2w; (Wilcox test).
Hunton at 6,005 ft.; drlg. 6,100 ft.
Springrose Drlg. Co.'s No. 1 Edwards, C SE Sec. 19-11-1.
T.D. 6,540 ft.; P.B. to 5,500 ft.

OSAGE COUNTY

Peters Pet. Co. and Norbla Oil Co.'s No. 1, SW cor. Sec. 15-25-5.
Drlg. 3,130 ft.

PAYNE COUNTY

Marathon Oil Co.'s No. 1 Potts, C SW SW Sec. 27-19-2.
Mississippi lime 4,315 ft.; drlg. 4,410 ft.

PITTSBURG COUNTY

McAllister Pet. Corp. et al's No. 1 Chunn, C SE NW Sec. 29-4-14.
T.D. 1,530 ft.; pipe collapsed; S.D.
P. H. Gray et al's No. 1 Lee, NW SE Sec. 12-5-12.
Drlg. 615 ft.

PONTOTOC COUNTY

E. M. Blanchard's No. 1 Crabtree, NE SE NE Sec. 27-3-6.
S.D. 2,920 ft.
Dixie Oil Co., Inc.'s No. 1 Graham, SW SE SW Sec. 13-1-7.
Mayes 2,249 ft.; drlg. 2,370 ft.
Gillett & Kroeger's No. 1 Robbins, NE SE Sec. 31-1-4.
Machine.
Gillette & Kroeger's No. 1 Duver, NW SE Sec. 36-1n-6e.
T.D. 784 ft.; S.D.
H. M. Marcum's No. 1 Magnuson, SW SE SE Sec. 23-2-7.
Gilcrease 1,220 ft.; U.R. 8-in. at 1,480 ft.
J. D. Sledge and Jack Lynch's No. 1-A (twin) Thompson, SW NE SW Sec. 1-1n-7e.
2,000 gals. acid; flowed 112 bbls. net oil and 65 bbls. wtr. in 24 hrs.; drlg. 4,237 ft. and flowing 50 bbls. oil daily from Hunton lime.
Southern Oil Corp.'s No. 1 Ladd, C NW NW Sec. 27-3-7.
Sylvan 1,770 ft.; drlg. 1,830 ft.

POTTAWATOMIE COUNTY

Blackgold Pet. Co.'s No. 1 Bizzell, C NE NW Sec. 15-7-3.
Hunton 4,430 ft.; T.D. 4,458 ft.; acidized and swabbed 250 bbls. oil; re-acidized and shut in.

SEMINOLE COUNTY

Atlantic Oil Prod. Co. et al's No. 1-A Thompson (community test), SW SE SE Sec. 15-11-8.
Drlg. 2,160 ft.
Ray Dorris and J. T. Hall's No. 1 Dorris, SE SE SW Sec. 31-10-7.
Spudded.
Crabtree Drlg. Co.'s No. 1 Chandler, NE SE SW Sec. 4-5-6.
Rigging up cable tools.
Harris and Haun's No. 1 Harjo, NE SE NW Sec. 11-6-6; (O.W.P.B.).
P.B. to 2,115 ft.; F.P.W.; S.D.
Gypsy Oil Co.'s No. 1 Grayson, SW NW Sec. 13-6-5.
Mayes 3,280 ft.; Viola 3,660-90 ft., T.D.; swabbed 7 bbls. per hr.
Verser & Clay et al's No. 1 Thomas, NE SE NW Sec. 1-6-6.
Drlg. 2,802 ft.
Wofford Drlg. Co. et al's No. 1 Abbott, NE cor. Sec. 33-8-7.
Rig.
Wofford Drlg. Co. et al's No. 1 Thomas, NW SE Sec. 8-6-7.
Spud and S.D.

TEXAS COUNTY (PANHANDLE)

Ben F. Ash et al's No. 1 Guymon Townsite, C NE SE Sec. 30-3n-15e; (Cimarron Meridian).
T.D. 2,420 ft.; fishing for drill pipe.

WASHITA COUNTY

Okla.-Midwestern Oil Co.'s No. 1 Dock, SW cor. Sec. 21-8-18w.
T.D. 2,430 ft.; lost tools in hole; rig rebuilt; S.D.
Anadarko Basin Oil Co.'s No. 1 Wolf, NE SW Sec. 23-9-17w.
Rigged up and S.D.

SOUTHERN OKLAHOMA

ATOKA COUNTY

Brookshire et al's No. 1 Rowland, NW NE NE Sec. 18-3-10.
H.F.W. 3,844 ft.; will abd.
Malernee et al's No. 1 D. O. K. Land Co., C SE SE Sec. 16-2s-13.
S.D. 3,115 ft.

BRYAN COUNTY

Hankin & Williams' No. 1 Slagg, SE SW SE Sec. 20-6s-13e.
T.D. 1,203 ft.; H.F.W.; abd. temporarily.
C. B. Welch's No. 1 Collins, SW cor. NE NE SE Sec. 19-8s-8e.
Machine.

CARTER COUNTY

Daphfine Oil Co.'s No. 1 Hooks, SE NW NW SE Sec. 5-1s-2w.
T.D. 3,281 ft.; dry and abd.

CHOCTAW COUNTY

J. V. Scrivener et al's No. 1 Swink, C NE SE Sec. 29-6s-20e.
T.D. 310 ft; T.A.

COMANCHE COUNTY

H. W. Baker's No. 1 Miller, SE SW SE NE Sec. 22-2-13w.
Spudded and S.D.
F. F. Stevens' No. 1 Green, SE SW Sec. 2-1-13w.
C.O. at 1,168 ft.
Heiden & Taylor's No. 2 Crutcher, C NE Sec. 11-1n-12w.
T.D. 362 ft.

JACKSON COUNTY

Associated Oil Co.'s No. 1 Harrell, NE SE Sec. 13-1-21w.
Spudded and S.D.
15-2-13.
Burk Royalty Co.'s No. 1 Gore, SE NW SE Sec. 3-1s-20w.
Drlg. 1,900 ft.
Gypsy Oil Co.'s No. 1 Stokes, SE NW SW Sec. 11-1-20w.
Lime 1,709-11 ft.; T.D. 1,722 ft.; S.D.
Gypsy Oil Co.'s No. 1-A (twin) Kelly, NE cor. Sec. 10-1n-20w.
P.B. to 1,424 ft.; comp. for a small gas well.
Gypsy Oil Co.'s No. 1-B Kelly (twin), 330 ft. S and 280 ft. W, SE cor. Sec. 10-1n-20w.
Oil sand 1,412-41 ft.; swbd. and flowed 247 bbls. oil; comp.
D. Scheig's No. 1 James, NE cor. Sec. 23-1-20w.
Moving in machine.

JEFFERSON COUNTY

Geo. Pace et al's No. 1 Jack, NE NW NW Sec. 10-4s-4w.
T.D. 3,031 ft.; H.F.W.; S.D.

JOHNSTON COUNTY

W. A. Delaney et al's No. 1 Diamond, NW NE SE Sec. 5-1s-8.
Drlg. 980 ft.

MARSHALL COUNTY

Paul Robb's No. 1 Vittetoe, C NE SE Sec. 11-5s-4e.
T.D. 4,942 ft.; recovered core barrel; S.D.

McCURTAIN COUNTY

J. V. Scrivener et al's No. 1, NE SW SW Sec. 24-6s-21.
Drlg. 500 ft.

MURRAY COUNTY

Equitable O. & G. Co.'s No. 1 Scott, CSL N½ NW SW Sec. 15-1s-3.
Drlg. 269 ft.
Manahan et al's No. 1 Ward, NE SE NW Sec. 18-1s-3; (Wilcox sand test).
Spudded.
T. E. Revell et al's No. 1 Wolfe, NE cor. Sec. 18-1-2.
Sand 2,658-70 ft.; show of oil; T.D. 2,735 ft.; pulled liner; ran 5-in. csg. to 2,630 ft. and S.D.
C. P. Williams et al's No. 1 Singleterry, SE SW NW Sec. 25-2s-3e.
T.D. 743 ft.; S.D.

STEPHENS COUNTY

Wm. Angle's No. 1 Johnson, NE cor. SE Sec. 17-1n-8w.
T.D. 2,473 ft.; 10,000,000 ft. of gas through 2-in. tubing; spraying some gasoline; est. at 40,000,000 ft. on open flow.
J. W. Madison's No. 1 Tussey, SW SE NW Sec. 24-1n-4w.
Rig down, drill pipe in hole; T.D. 3,220 ft.

Do You Know This Signature

Jack Thorn

?

IF SO, DO YOU KNOW WHERE JACK THORN IS?

▼ ▼ ▼

REWARD

FOR LOCATING HIM

JACK THORN, an oil broker and storage steel contractor, disappeared from El Dorado, Arkansas, October 7, 1926. Height 5 ft. 10 in. . . . weight 160 pounds . . . light brown hair . . . age now about 47. Scar on his left cheek resembles a dimple.

A reasonable reward will be paid for information leading to his present location and positive identification.

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A. F. HOUSE

LITTLE ROCK, ARKANSAS

Butler County Oriskany Sand Test May be Drilled Deeper After Light Showings of Oil and Gas

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Jan. 14.—The Oriskany sand test being drilled on the Lehigh Portland Cement Co. lease in Muddy Creek Township, Butler County, western Pennsylvania, by James H. Duff and John T. Galey, failed of commercial production in the sand. After tedious drilling in a very hard dark brown cherty lime (the Onandaga) the top of the Oriskany was reached at 4,836 feet and there were 15 feet of a fine granular sand, chiefly silica, which ended at 4,851 feet. Then the tools went into calcareous shale. There was a showing of lively oil in the sand and also a showing of gas. The test is at present shut down and may be drilled somewhat deeper.

The exact location of this test can be found on the Zelienople Quadrangle and is .6 mile south, 25 degrees west of Paynes. The elevation of the mouth of the well is approximately 56 feet below the top of the Vanport limestone, and was located after extensive seismograph investigation during the summer. A previous test by these operators about 4 miles west of Slippery Rock Township, Lawrence County, also failed to find either oil or gas in the Oriskany sand. This location was on the J. Scott Munnell farm, 792 feet south of the township line road and 2½ miles north, 78 degrees east of Princeton, Pa. The mouth of this well started at the base of the Vanport limestone horizon and reached a depth of 4,767 feet, or below the Oriskany.

Road conditions, caused by the recent thaws, have retarded new work and also completions. Only nine wells were completed in the lower Eastern fields of which eight were gas wells and one a small producer. There were also six dry holes.

SOUTHEAST OHIO

Three wells in Southeast Ohio proved dry during the week. In Harrison County, among old production in the Adams Field in Section 32, Archer Township, C. B. Worstell drilled No. 5 on the J. A. McClain farm through the Berea sand to 1,300 feet. It was dry.

In Jefferson County, Elliott and Hindman drilled a test on the Johnston heirs farm in Section 28, Steubenville Township, through the Berea to 1,475 feet. It was dry.

In Perry County, in Section 33, Pleasant Township, the Allegheny Co. drilled No. 27 on the Thomas and Mary Monahan farm through the Berea sand to 1,050 feet. It also proved dry.

In Columbiana County, there is a new test drilling which is of interest. In the SE Section 30, Madison Township, Union Gasoline & Oil Corp. is drilling on the William Jenkins farm which is scheduled for a fairly deep test. It is about a mile from Glascow on the Glascow anticline and the elevation of the mouth of the well is 1,327 feet. Considerable geophysical work was done in this county during the summer in an effort to locate some lower sand domes.

SOUTHWEST PENNSYLVANIA

No gas wells nor producers were completed in Southwest Pennsylvania during the week. There was one additional dry hole. In Morris Township, Greene County, Myers, Hoskinson and others drilled deeper No. 1 on the M. C. Francis farm after the production in the Gordon stray sand played out in a short time. It was drilled through the Fourth sand 2,973-3,000 feet and at 2,983 feet, there was a showing of gas which began at 360,000 feet a day but which blew down rapidly to less than 20,000 feet a day. This test is being plugged.

In this county, Johnson and Eddy have started drilling a second test on the W. L. B. Roberts farm in Gilmore Township. In Greene Township, John Lantz has reached 2,240 feet in deepening No. 1 on his own farm. In Richhill Township, Lewis & Co. are rigging up on the S. C. Chess farm.

In Amwell Township, Washington County, Carnegie Natural Gas Co. has shut down at 1,245 feet on the R. M. Carrons farm. On the M. Manon farm, this company is still shut down waiting for the cement to harden at 1,725 feet. F. K. Fawcett and others have reached 2,940 feet on the J. C. and Anne Phelan farm. Wise Oil & Gas Co. is down 2,936 feet on the Jacob Snyder farm.

In East Findley Township, Washington County, the Natural Gas Co. of West Virginia has two wells drilling. No. 1 on the G. W. Tilton farm has reached 1,880 feet and the test on the T. F. Ealy farm is drilling at 500 feet.

In South Franklin Township, Washington County, No. 1 on the S. A. Dague farm, being drilled by Carnegie Natural Gas Co., has reached 3,165 feet and is through the Fifth sand which was dry.

In Morris Township, Washington County, James McCracken & Co. have started drilling deeper No. 1 on the H. B. Saunders farm. This was formerly a gas well in the gas sand and drilling started again at 1,781 feet. The top of the gas sand was at 1,730 feet with 872,000 feet a day from 1,776-80 feet but after some months the gas was exhausted. In Cecil Township, same county, Amon and Kaufman and others have started drilling another well on the Thomas Weaver farm, about 500 feet southwest of No. 1, which is a fair producer.

WEST VIRGINIA

There was only one producer completed in West Virginia. In Roane County, Henderson Oil Co. completed a test on the George L. Ball farm in the Salt sand showing for about 6 bbls. a day. It is about 400 feet southeast of the test on the F. H. Bee, Jr., farm.

In Kanawha County, the wells drilling to the Oriskany sand all made progress during the week. S. B. Avis, trustee, reached 4,360 feet on the W. T. Copen heirs farm. V. C. Smith and others are drilling at 2,074 feet on the island at the mouth of Coopers Creek, the Matheney, Wertz and others lease. Clyde Oil & Gas Co. is running casing at 1,536 feet on the F. W. Shinn farm. Yoak Oil & Gas Co. is drilling at 575 feet on the W. T. and J. H. Goshorn farm and there was a showing of oil and gas in the Dunkard sands. Benedum and Trees have reached 405 feet on the M. C. Wingfield farm. All are in Elk district, and the Oriskany is found at about 4,800 feet.

Gas Wells

In Cabell County, West Virginia Gas Co. completed deepening No. 1 on the Sarah J. Kendall farm in Grant district in the Brown shale at 3,335 feet and it will make a small gas well. The Big lime is at 1,529-59 feet; the Berea at 2,001-20 feet, and the Brown shale extended from 3,008 to 3,325 feet with gas at 3,080-3,260 feet. There was also some gas found in the Berea sand at 2,006-09 feet.

In Calhoun County, F. F. McIntosh completed the second test on the Seymore Settle farm in Sherman district at a total depth of 1,950 feet. It will make a small gas well in the Injun sand.

In Kanawha County, there were two gas wells. Godfrey L. Cabot, Inc., completed No. 48 on the A. D. Huntington farm in Cabin Creek district at 2,670 feet. The Big lime was at 1,944-2,158 feet with gas showing at 2,115-25 feet. The Big Injun was at 2,158-90 feet. The Weir sand was at 2,222-2,323 feet with gas at 2,232-37 feet. It was at first a small well but it was treated with about 1,541 gallons of acid and now gauges 465,000 feet a day. In the same district, Winifrede Co. completed No. 9 on its own property in the Weir sand at 1,803 feet and it is showing for a light gas well.

In Ritchie County, there were three gas wells. On Leatherbark Creek in Murphy district, Clem S. Morris completed a test on the Morris and Carter lease, mapped as the Gill heirs, in the Injun sand at a depth of 1,980 feet. It gauges 720,000 feet a day. In Grant district, Mellon Brothers completed deepening No. 6 on the Conaway and Patton lease at 1,916 feet in the Injun sand and it is showing for about 75,000 feet a day. In Murphy district, Clarvin Oil & Gas Co. completed a test on the William Marbury farm 2 miles west of Petroleum in the bottom of the Injun sand and it is a fair gasser gauging about 750,000 feet a day.

In Wood County, John E. Yeager and others completed a test on the W. R. Wambsley farm in Union district in the Maxon sand showing for 250,000 feet a day with a small showing of oil. The packer has been set and it is tubed for gas.

In Wirt County, Peter Silman completed drilling a test on his own property in Clay district through the Salt sand and it is a dry hole.

Drilling in West Virginia

In Cabell County, there are two new operations. In McComas district, Boyles and Gardner have made a location on the Edward Owens farm. H. H. Baker Gas Co. is drilling on the Floyd L. Bias farm. In this district, R. H. Adkins and others have reached 2,200 feet in No. 1 on the F. F. Starcher farm. In Grant district, Shale Gas Co. is shut down at 900 feet fishing on the Bracy Beckett farm.

In Boone County, Pure Oil Co. is drilling three wells, all in Sherman district. No. 71 on the Federal Coal Co. tract, has reached 2,936 feet, and No. 72 is down 2,014 feet. No. 3 on the A. M. Prichard farm is drilling at 630 feet. In Washington district, Boone County Coal Corp. is moving in tools on its own property and just south of the White and Hopkins lease on which a fair gas well was completed.

In Calhoun County, A. Rothwell and others are rigging up on the J. W. Pell heirs farm in Sherman district, mapped as the J. K. Sturms farm. Godfrey L. Cabot, Inc., is drilling at 1,120 feet on the Henry Knight farm. In Center district, Southeastern Gas Co. has started drilling on the Rosa Daubins farm. Starcher and Richards have made a location on the R. Paul Ritchea farm. In Lee district, M. F. Crawley is down 1,800 feet on the Lester and Riggs and others lease. In Washington district, Howard Jarvis is down 490 feet on the J. S. Rogers farm, a test. Everett Starcher and others have reached 850 feet on the Lubana J. Jarvis farm. Jarvis Gas Co. is drilling at 500 feet on the C. L. and G. W. Jarvis farm. Carroll and Hamilton are at 1,997 feet on the E. C. Knotts heirs farm.

In Washington district, Kanawha County, Harvard Gas Co. is spudding a second test on the W. Compton farm. In Cabin Creek district, Godfrey L. Cabot, Inc., has reached 2,950 feet in deepening old No. 3 on the A. D. Huntington lease.

In Pleasants County, Ritchieville Oil & Gas Co. is drilling on the Pierce Mathney farm on Limestone Run, a branch of Cow Creek, in Jefferson district. In Union district, Tyler Oil Co. is down 200 feet on the William Johnson farm.

In Ritchie County, no new work is listed. In the Pike Pool, Lucas and Mahaney are drilling at 1,350 feet in No. 4 on the J. F. and Laura Kelley farm in Clay district. McCall Drilling Co. is down 1,760 feet on the Elizabeth Pyles farm, a test. W. A. Bickerstaff has reached 510 feet on the John Grogen farm. In Murphy district, W. R. Hays and others are drilling at 1,750 feet on the M. J. Livingston farm, a test.

In Roane County, on the waters of Peniel Run in Curtis district, Reedy Oil

(Continued on Page 73)

Gulf Coast Water Shipments During November, 1934

Company, terminal—	Crude—Coastwise	Crude—Export	Refined—Coastwise	Refined—Export	Total
Atlantic P. L. Co.:					
Atreco	1,297,280.49	78,407.23	8,321.63	.....	1,384,009.35
Texas City	288,350.99	.....	3,992.26	.....	292,343.25
Harbor Island	446,525.99	.....	.....	.....	446,525.99
Gulf Refining Co.:					
Port Arthur	177,208.35	107,440.09	1,951,555.82	20,873.17	2,257,077.43
Humble O. & R. Co.:					
Baytown	1,317,245.41	.....	2,284,992.66	724,149.93	4,326,388.00
Harbor Island	1,524,485.97	.....	.....	.....	1,524,485.97
Ingleside	101,880.08	.....	.....	.....	101,880.08
Texas City	232,937.94	62,326.88	.....	.....	295,264.82
Neches	73,272.36	.....	.....	.....	73,272.36
Magnolia Pet. Co.:					
Beaumont	750,718.56	.....	1,741,955.44	.....	2,492,674.00
Pure Oil Co.:					
Smiths Bluff	321,984.00	.....	637,728.00	.....	959,712.00
Shell Pet. Co.:					
Houston	151,001.76	181,170.95	945,893.02	169,780.78	1,447,846.51
Norco	.....	.....	502,829.90	.....	502,829.90
Standard Oil Co. (La.):					
Baton Rouge	430,847.00	.....	471,130.00	170,034.00	1,072,011.00
Sun P. L. Co.:					
Sabine Pass and Sun	1,450,425.76	.....	.....	.....	1,450,425.76
The Texas Co.:					
Port Arthur	1,071,242.00	473,957.00	2,113,035.00	467,031.00	4,125,295.00
Miscellaneous:					
Houston	999,857.33	552,685.05	1,252,756.32	363,347.29	3,168,646.49
Total November, 1934	10,635,264.49	1,456,017.20	11,924,190.05	1,915,216.17	25,920,687.91
Total October, 1934	11,942,151.92	1,570,894.48	11,803,936.33	1,793,755.06	26,942,440.79
Difference	1,306,887.43	114,877.28	110,253.72	121,461.11	1,021,752.88

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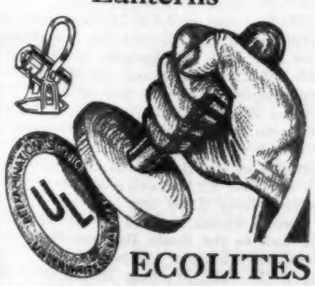

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Good Week of Completions in Central Ohio; Some Fair Wells in Kentucky

By GEORGE A. WHITNEY
Staff Correspondent, Central West Fields

FINDLAY, Ohio, Jan. 14.—In Wyandot County, Wood and others' No. 2 on the Thomas Bowman farm, Section 15, Pitt Township, made a 4-bbl. pumper at 1,480 feet. Same parties are drilling No. 5 on the Edward Orton farm, Section 22, same township. Brown and others' No. 4 Edward Orton farm, Section 22, Pitt Township, produced 1 bbl. at a depth of 1,485 feet. In Tymochtee Township, Miller and others are fishing at 1,475 feet on the L. F. Bogard farm, in Section 4. Bosse Brothers have a rig on the Adam Gamber farm, Section 33, Salem Township, same county.

In Logan County, Logan Coal Products Co. is drilling on the Phil Crow farm, in Washington Township, a purely wildcat venture.

In the Tiffin Field of Seneca County, renewal of oil and gas drilling in Jackson and Liberty Townships, northwest of Tiffin, was forecast following a burst of leasing activities. Ray C. Jones, Cleveland operator, who several years ago carried on an extensive development in the territory, has leased 10 farms of more than 1,000 acres in the two townships. He recently has been operating in the new gas and oil field near upper Sandusky, Ohio. R. E. Greene is reported to be drilling No. 3 on the T. C. and R. G. Schaull farm, Section 30, Liberty Township, and J. L. Barrett is drilling No. 1 on the T. N. Einsel farm, Section 1, Hopewell Township, same county.

In Sandusky County, Joseph M. Uzmann and others are drilling No. 2 on the Peter Bowe farm, Section 18, Scott Township.

In Van Wert County, Duncan & Smith report a test abandoned on the William McCracken farm, Section 29, Jackson Township. In Darke County Adrian Tester abandoned his test on the C. Brown farm, Section 14, Mississnaw Township.

In Henry County, Stoddard & Darke are reported drilling No. 1 on the C. S. Shelly farm, Section 7, Marion Township, and P. D. Snoenby is drilling No. 1 on the Carrey heirs farm, Section 6, same township.

CENTRAL OHIO

In the Central Ohio Field 14 wells were brought in, nine being gas wells, four oil wells with an initial production of 99 bbls., and one dry hole.

The best oil well was Pure Oil Co.'s No. 2 on the Ashcraft heirs farm, Section 7, Jackson Township, Muskingum County, with an initial of 60 bbls. at a depth of 3,222 feet. Same company is drilling No. 3 on the E. J. Hankins farm, same section. Same company has a rig for No. 3 on the Zonetta Brown farm, in Section 6, Knox Township. Same company's No. 4 on the H. W. Scott farm, Section 3, Brush Creek Township, is a gas well at 4,130 feet.

In Medina County, Edward Obermiller is drilling No. 1 Frank V. Wood farm, Lot 31, Liverpool Township, an important test.

In Lorain County, J. W. Cushing's test on the Frank Barr farm, Lot 14, Avon Township, is dry. J. W. Cushing is drilling on the James and Anna Lewis farm, Section 15, same township. McMillan and others are drilling No. 2 on the Sylvania Jackson farm, Section 15, Carlisle Township.

In Cuyahoga County, Edward Obermiller's No. 4 on the J. Merkle farm, Section 31, Olmstead Township, is a gas well at a depth of 2,580 feet.

In Stark County, White & Lyons' No. 1 Hattie Leaman farm, Section 26, Perry Township, is a gas well at 4,567 feet. East Ohio Gas Co. is drilling No. 1 on the Dan & Mary Braucher farm, Section 10, Jackson Township. In Plain Township, East Ohio Gas Co. is drilling No. 2 on the Mary Esselbourne farm, Section 4, and has a rig for No. 1 on the Nelson Stambaugh farm, Section 4.

In Summitt County, East Ohio Gas Co. is drilling No. 3 on the Everette Bexler farm, in Green Township. Same company is drilling No. 1 Rose Lamb farm, Section 17, same township.

In Fairfield County, City Natural Gas Works has a rig for No. 4 on the Charles Fauble farm, Section 2, Berne Township.

In Knox County, Upham Gas Co.'s No. 1 on the Albert and Susanna Arnholt farm, Section 12, Jefferson Township, is a gas well at 2,926 feet. Upham Gas Co. has a rig for No. 1 on the Charles E. Wharton farm, in Section 15-16, Butler Township, and a rig on the Milen E. Mizee farm, same township. H. E. Perkins is drilling No. 1 on the Jennie Patterson farm, Section 18, Monroe Township.

Coshocton County

In Coshocton County, O. G. L. & Coke Co.'s No. 1 Nicholas Lower farm, Section 19, Mill Creek Township, is a gas well at 844 feet.

In Licking County, Preston Oil Co.'s No. 3 Wallace Davidson farm, Section 13, Fallsburg Township, produced an initial of 36 bbls. at 2,980 feet. Blue Rock Oil Co. is drilling No. 6 Rachael Freece farm, Section 14, same township.

In Muskingum County, Mid-East Gas Co.'s No. 2 on the Frederick Haas farm, Section 30, Harrison Township, is a gas well at 4,089 feet. Fulk & Standberry are drilling No. 1 on the William W. Baughman farm, Section 21, same township.

In Guernsey County, M. J. Purdy's No. 1 R. O. and Ester Gibson farm, Section 16, Millwood Township, is a gas well.

In Meigs County, Summers Oil & Gas Co.'s No. 2 William D. Rouch, Lot 30, Sutton Township, is a gas well at 1,795 feet. In Lebanon Township, A. N. Bengel's No. 2 Lucy Larkin farm, Section 20, is a gas well at 2,012 feet. Ohio Fuel Gas Co. has a location on the Earl T. Winters farm, Section 36, same township, and Houston and others are drilling No. 2 on the Nicholas heirs farm, Section 30, same township.

In Perry County, Ohio Fuel Gas Co.'s No. 2 Blanche Shough farm, is a gas well at 3,080 feet, in Section 8, Reading Township. Fulk & Stanbery are drilling around 3,900 feet on the William W. Baughman farm.

In Vinton County, Haslett & Walters' No. 1 Henry Cecil farm, Section 2, Harrison Township, produced 2 bbls. initial at 454 feet.

In Lawrence County, Barton & Utsinger are rigging up on the W. T. and Emma Miller farm, Section 24, Huntington Township, Gallia County. Frick and others are shut down on No. 1 William Murdock farm, Section 33, Rome Township. C. C. Wolfe and others' No. 1 Edward Miller farm, Section 28, same township, is partly rigged up. R. Schaub is partly rigged up on No. 1 Caughlin Hunt farm, Section 35, Windsor Township, and Shale Development Co. is rigged up for No. 1 William P. Booth farm, Section 21, Union Township.

KENTUCKY

The best completion in the Kentucky Field was Chester Oil Co.'s No. 5 on the Ida Fuqua farm, Hancock County, with an initial of 100 bbls. James C. Ellis' No. 3 on the H. D. Fuqua farm produced an initial of 80 bbls. Joseph B. Mayer's No. 10 on the Jess Stewart farm produced 10 bbls., and his No. 12 J. W. Matthews farm, same county, produced 10 bbls. initial.

The Ohio County Field is the most active other county. Snowden-McSweeney Co.'s No. 4 Kate Roberts farm produced 15 bbls. initial. Mecca Oil Co.'s No. 7

(Continued on Page 66)

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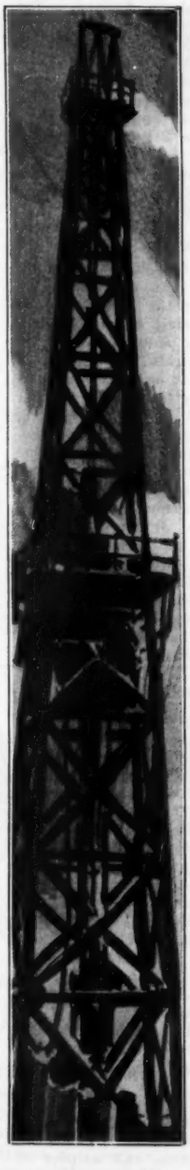

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Pacific Coast Agency Is Facing Another Crisis; Mountain View Operators Are Dissatisfied

By L. P. STOCKMAN
Staff Correspondent, California Fields

LOS ANGELES, Calif., Jan. 14.—The Pacific Coast Petroleum Agency is facing another of its periodic crises. Following the Supreme Court decision in the Amazon case the Mohawk Oil Co. informed Umpire Pemberton that it would no longer curtail its production to the quotas issued by him and then reduced the price of gasoline 2 cents per gallon. There is nothing in the marketing agreement which prevents a marketer from reducing prices but the directors have authority to institute court proceedings to force compliance with the provisions that prohibit the utilization of hot oil or any crude produced in excess of the quantity allocated.

It is obvious that the situation must be corrected immediately either by a restoration of prices by Mohawk or a comparable reduction effected by other marketers. The fact that every other marketer has been sitting tight indicates that they have hopes of averting a general reduction. The reduction in prices is limited to the San Joaquin Valley where the Mohawk markets most of its gasoline, but there is no telling how soon the area will spread. The reason for Mohawk's action is conjectural as no explanation has been given. It has been known for several months that Mohawk and other operators in the Mountain View Field have been dissatisfied because of the severe curtailment imposed upon them. This field seems to be entitled to a better break as is also Santa Barbara Mesa.

Not Applicable

The Supreme Court decision, which voided Section 9(c) of the National Recovery Act, is not expected to have any bearing on the curtailment program in California because this proration plan is based on the code of fair competition for the petroleum industry. U. S. Attorney Pierson Hall, in a statement clarified the issue by calling attention to the fact that "the Amazon case decided by the Supreme Court involved Section 9(c) of the National Industrial Recovery Act, whereas the injunction granted by Judge McCormick recently was under authority of Section 3 of the act permitting the adoption of the code. Section 9(c) of the act is entirely unrelated to those sections of the act under which the oil code and other codes were adopted. After consultation with the attorney general's office it is felt the opinion in the Amazon case will not materially affect either proration in California or the proceedings in the Wilshire case, both of which were had under the oil code and neither of which rests for its validity on Section 9(c) of the act."

In order to eliminate the confusion existing since the Supreme Court decision and to remove any possibility of curtailment troubles, K. R. Kingsbury, president of the Standard Oil Co. of California, has issued a statement to the effect that "the Supreme Court decision in the Amazon case has no apparent bearing on the present operation of the industry in California. The industry is working under the code of fair competition for the petroleum industry and under the National and California Industrial Acts. The only decision affecting the National Industrial Recovery Act relates to the power of the President to restrict the interstate movement of oil produced in violation of state laws. On that point the court held that as Congress did not indicate its policy with respect to the interstate movement of illegally produced crude, the authority given to the President to regulate interstate movement was an unconstitutional delegation of legislative authority.

"Up to date the only judicial decision applicable to oil code operations in California is the well considered decision of Judge McCormick in the Wilshire Oil Co. case, sustaining the action of the petroleum administrator under the code in restricting crude oil production. So far as oil operations in California and the oil code are concerned, the Supreme Court decision creates no change in the situation. There is, therefore, no reason to anticipate any change in the present effective administration of the production clauses of the code by the petroleum administrator. Production remains subject to curtailment under the code. So far as hot oil and its products from other states are concerned, California still has its own statute prohibiting the importation or sale of illegally produced crude oil or its products."

Potential Up

Potential daily production of California for the month of January was set at 1,481,430 bbls. This is 47,960 bbls. in excess of the potential for the month of December. It is 270,353 bbls. per day in excess of the potential for January, 1934, and from present indications may reach a higher level during February as there are a number of impending completions which should materially add to the state's potential. San Joaquin Basin fields were given an increase of 21,745 bbls. which brought the potential of this section up to 815,915 bbls. per day. Potential of the coastal area was increased 12,655 bbls. to 177,360 bbls. per day while the potential of Los Angeles Basin fields was stepped up 13,560 bbls. to a total of 488,155 bbls. per day. The Mountain View Field of Kern County was given an increase of 16,765 bbls. which brings its potential up to 57,975 bbls. per day. The North Dome of Kettleman Hills did not show any great change due to the relatively few large wells finished during the preceding month. The potential of the Edison Field was reduced 1,490 bbls., which brought the potential down to 2,840 bbls.

January crude oil production calls for an allotment of 463,962 bbls. per day with a water relief allowance of 9,448 bbls. or a total of 473,410 bbls. Mountain View Field, with a potential daily production of 57,975 bbls. is given a daily allowable of 7,832 bbls., while Santa Barbara Mesa, with a potential of 21,530 bbls. is given an allowable of 2,688 bbls. per day. Kettleman North Dome Field has been assigned an allowable of 63,039 bbls. per day.

Drilling Fees

The Los Angeles city council has passed an emergency ordinance designed to cover inspection costs incident to the regulation of drilling operations within the corporate limits of the city. The ordinance sets up an application fee of $100 for each new well and $25 per year for inspection of each well drilling or producing. The emergency clause was attached to the ordinance so that the fire commission will be in a position to collect the necessary fees before drilling permits are issued. The commission has 15 applications for permits to erect rigs in the new section of the Playa Del Rey Field of Los Angeles basin but these permits cannot be issued until existing zoning ordinances are amended. The city planning committee of the Los Angeles city council has again refused to recommend a change in zoning restrictions in order to permit drilling operations in the vicinity of Pico Boulevard and Robertson. The Marblehead Land Co. indicated it would petition the council to give the matter consideration but precedent indicates that they will sustain the planning commission.

Drilling operations continue to hold up in good shape and if the present unsettled condition of the refined oil market is stabilized in the near future we may anticipate a further substantial increase during the next several months. The completion list during the current week was fairly large and representative of conditions existing in several fields throughout the state. There are a number of other potential producers nearing completion and consequently we may anticipate a rather large number of completions within the next 30 days. These new wells will be spread out over a number of fields with the result that their initials will show a wide variation. Exploration work is still on the upgrade.

Three wells were put on production in the Mountain View Field of Kern County this week and two or three more should be tanking oil within the next few days. The Wood-Callahan Oil Co. finished No. 3 National and this new well was brought in flowing 902 bbls. of clean 28.3 gravity oil per day from 5,714 feet after the hole had been completed with a 6⅝-inch liner including 254 feet of perforated. Standard's No. 3 Wible, another new well, was completed flowing 1,530 bbls. of exceptionally clean 30.3 gravity oil per day from 5,477 feet following the landing of a 7-inch liner carrying 86 feet of perforated. Sovereign Oil Co. successfully overcame the water trouble that developed in No. 2 S. J. and this well was recompleted on a compressor doing 958 bbls. of 32.8 gravity oil and 986,000 feet of gas per day from 6,224 feet. Potential producers scheduled for completion in the immediate future in this field include Barnsdall's No. 2 Morris, Mohawk's No. 5 Hood and Sovereign Oil Co.'s No. 3 S. J.

Edison

Operators in the Edison Field of Kern County had a busy week as they succeeded in completing four new wells. The Shell headed the list by finishing No. 1 Nichols doing 448 bbls. per day from 3,047 feet and No. 1 Osborne flowing 121 bbls. of 19.8 gravity oil and 524,000 feet of gas per day from 3,794 feet. No. 1 Nichols encountered the top of the Schist at 3,040 feet and was plugged back to 2,900 feet just previous to completion. No. 1 Osborne was finished with a 5¾-inch liner carrying perforations at 3,408-66 feet, 3,489-3,547 feet, 3,640-3,720 feet and at 3,743-73 feet. Monterey Exploration Co. finished No. 8 Duff and this new well was brought in doing 573 bbls. of 22.4 gravity oil per day following completion of the hole at 3,576 feet with a 6⅝-inch liner including 410 feet of perforations. No. 2 Stuart-Gerard of Gilco, Inc., was only a small well upon completion as it showed an initial of 85 bbls. of 22.1 gravity oil on a compressor from 2,259 feet.

Daniel Fisher finished an exceptionally big well in the Santa Barbara Mesa this week when his No. 1 Mesa came in flowing 3,210 bbls. of clean 19.1 gravity oil per day from 2,023 feet. This well came in several days previous to its final completion but subsequently sanded up. It showed considerable gas pressure during the course of work and blew the swab out of the hole in its initial attempt. Jacques Vinmont finished his first producer in the Mesa Field a few days ago but it only proved to be good for 240 bbls. of 19.2 gravity oil initially from 2,008 feet.

Ventura Avenue

The Shell added a new well to its list of producers in the Ventura Avenue Field

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	December 31		December 23			
Intercoastal-domestic—	Total this week	Daily average	Total this week	Daily average	This year to date	Same time last year
Crude oil	.....	.....	.....	.....	.....	80,650
Fuel oil	.....	.....	.....	.....	11,805,207	5,070,303
Diesel and gas oil	.....	.....	.....	.....	1,507,410	1,545,956
Gasoline	273,516	39,074	223,322	31,903	8,269,556	10,671,649
Kerosene	203,821	29,117	53,679	7,668	1,581,671	1,216,090
Asphalt	.....	.....	.....	.....	70,019	12,179
Other finished oil	.....	.....	.....	.....	54,778	195,853
Other unfinished oil	.....	.....	.....	.....	.....	72,584
Foreign exports—						
Crude oil	92,740	13,249	.....	.....	8,118,205	7,729,785
Fuel oil	673,120	96,160	568,729	81,247	14,191,274	7,979,912
Diesel and gas oil	132,578	18,940	165,717	22,245	4,334,792	3,668,190
Gasoline	174,332	24,905	128,857	18,412	4,926,822	5,365,018
Kerosene	.....	.....	.....	.....	1,746,611	1,865,305
Other finished oil	.....	.....	.....	.....	37,955	12,086
Other unfinished oil	.....	.....	91,223	13,032	325,496	66,375
Coastwise-domestic—						
Crude oil	.....	.....	.....	.....	7,616,845	6,170,379
Fuel oil	207,393	29,628	172,384	24,626	9,696,314	10,644,188
Diesel and gas oil	30,792	4,399	2,293	328	802,361	993,103
Gasoline	105,782	15,112	194,848	27,835	13,704,469	12,326,900
Kerosene	.....	.....	2,959	423	306,236	198,097
Naphtha distillates	.....	.....	.....	.....	.....	27,651

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Fuel oil	.....	.....	.....	.....	110,650	.....
Diesel and gas oil	.....	.....	.....	.....	675,775	916,276
Gasoline	.....	.....	.....	.....	435,943	804,548
Kerosene	.....	.....	.....	.....	276,593	530,136
Lubricants	5,431	776	.....	.....	57,543	41,339
Foreign exports—						
Crude oil	71,914	10,273	103,257	14,751	2,032,523	1,775,431
Fuel oil	25,192	3,599	62,967	8,995	2,239,133	1,873,671
Diesel and gas oil	.....	.....	2,332	333	1,177,314	1,088,749
Gasoline	69,572	9,939	79,947	11,421	3,882,361	4,075,115
Kerosene	32,190	4,741	376	54	1,078,334	1,137,742
Lubricants	10,875	1,554	.....	.....	181,625	158,140
Other finished oil	.....	.....	.....	.....	2,760	7,909
Other unfinished oil	.....	.....	.....	.....	5,750	26,278
Coastwise-domestic—						
Fuel oil	160,480	22,926	.....	.....	5,392,865	4,097,094
Diesel and gas oil	.....	.....	.....	.....	119,036	249,662
Gasoline	153,305	21,901	89,395	12,485	5,694,231	4,507,989
Kerosene	.....	.....	.....	.....	82,434	114,138

this week when No. 77 Taylor was brought in flowing 620 bbls. per day, but the high cut of salt water may make it obligatory for the company to undertake some corrective work. This new well was put on production at 8,132 feet after the hole had been plugged back from 9,482 feet. The Shell's No. 35 Gosnell finished last week has also developed a chronic case of salt water and may likewise require additional work. The Shell and Ralph B. Lloyd have consummated an agreement whereby they will develop 3,000 acres immediately adjoining the Ventura Avenue Field on a fifty-fifty basis. The Shell will do the actual development and both will share alike in the cost as well as in the amount of production developed. Some of this acreage is almost definitely assured of resulting in production in as much as the Property Service Corp.'s No. 3 Dabney-Lloyd has shown evidences of resulting in commercial production.

The acreage involved in the deal between the Shell and Lloyd is held by the latter and embraces the Dabney-Lloyd and Joe Sexton properties. The Associated Oil Co. is doing the actual drilling work on No. 3 Dabney-Lloyd of the Property Service Corp. on a cost plus basis. This well blew out and took fire several weeks ago and practically everything above ground but the boilers was destroyed by the fire which burned for several hours before the well sanded up. Since the starting of drilling operations on this well, the Shell has conducted a very careful survey as to the potentialities of the Dabney-Lloyd and Sexton leases and agreed to develop the properties on a fifty-fifty basis.

Capitan

The Shell finished an exceptionally good well in the Capitan Field of Santa Barbara County this week when No. 1-4 Covarrubias was brought in flowing 955 bbls. of clean 43.3 gravity oil and 298,000 feet of gas per day from 2,327 feet. This new well was finished with a 4¾-inch liner carrying 82 feet of perforated and 2,278 feet of 2½-inch tubing. The company has staked location for No. 5 on this lease and is making preparations to make a production test on No. 2 Orella from 3,199 feet. The General Petroleum's No. 12 Erburu is standing cemented at 2,339 feet but should drill out within the next few days.

The Union has completed a second well in its wildcat acreage in the Santa Maria district but the initial of this well, No. 1 Enos, was somewhat disappointing as it was only good for 80 bbls. of 17.5 gravity oil per day on the beam. A third well will be drilled on this acreage some time within the next 60 days but location has not yet been decided upon. The Barnsdall is expected to finish a new well in the Elwood Field of Santa Barbara County some time within the forthcoming 15 days as No. 8-A on tideland permit No. 88 is standing cemented on top of the pay at 3,324 feet. The East Elwood Petroleum Co. also has a well in the pay and preparations are being made to land a string of pipe within the next few days. Drilling operations in the Goleta district do not appear to be any too promising as the Shell is down 6,000 feet in No. 1 Bishop and the Standard is landing casing in No. 2 Chase & Bryce. The latter well is expected to show commercial production but the status of the former is still dubious.

Kettleman Hills

The Kettleman North Dome Association successfully overcame water trouble in its No. 32-30-J in the North Dome and this new well was brought in flowing 1,081 bbls. of clean 34.6 gravity oil and 170,000 feet of gas per day from 8,662 feet after the hole had been plugged back from 8,733 feet. Kenda has not yet completed the job of straightening the hole in No. 56-8-Q, which was plugged back from 10,154 feet several weeks ago in order to facilitate redrilling operations. Good progress is being made, however,

(Continued on Page 73)

IMPORTANT NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S. T. R.	Depth	Status—
General Pet. Co., No. 12 Capitan, Santa Barbara Co.	32- 5-30	2,339	cmtd.
Shell Oil Co., No. 2 Capitan, Santa Barbara Co.	32- 5-30	3,199	testing
Shell Oil Co., No. 3 Capitan, Santa Barbara Co.	5- 4-30	2,327	flow 955 b.d.
Royalty Serv. Corp., No. 1 Los Alamos, Santa Barbara Co.	35- 9-32	4,500	suspended
Union Oil Co., No. 3 Santa Maria, Santa Barbara Co.	35-10-34	3,372	pump 70 b.d.
York-Smullin, No. 2 Lompoc, Santa Barbara Co.	33- 8-34	1,860	sd. sh. drlg.
Barnsdall-Rio Grande, No. 10-88 Elwood, Santa Barbara	tideland	....	rigging up
East Elwood Pet. Co., No. 1 Elwood, Santa Barbara Co.	14- 4-29	3,722	temp. idle
Shell Oil Co., No. 1 Goleta, Santa Barbara Co.	20- 4-28	6,000	rd. sd. drlg.
Standard Oil Co., No. 2 Goleta, Santa Barbara Co.	17- 4-28	4,850	to set pipe
Ortega Oil Co., No. 1 Summerland, Santa Barbara Co.	16- 4-26	4,146	bailing
Woodrow Pet., No. 1 Rincon, Ventura Co.	4- 3-24	7,612	suspended
General Pet. Co., No. 4 Rincon, Ventura Co.	tideland	....	bldg. pier
Las Posas Pet., No. 1 Las Posas, Ventura Co.	23- 3-20	7,370	cmtd. 7,000
El Rancho Oil Co., No. 1 South Mountain, Ventura Co.	9- 3-19	....	bldg. rig
The Texas Co., No. 128 South Mountain, Ventura Co.	4- 3-19	5,430	fish D.P.
Oil Ridge Oil Co., No. 1 Fillmore, Ventura Co.	1- 4-19	1,500	br. sh. drlg.
Bolsa Chica Oil Co., No. 2 Piru, Ventura Co.	4- 4-18	461	fishing
Dawson Oil Co., No. 1 Simi, Ventura Co.	5- 2-17	1,876	swabbing
Rancho Oil, Inc., No. 1 Ojai, Ventura Co.	18- 4-22	2,525	suspended
Continental Oil Co., No. 1 Ojai, Ventura Co.	12- 4-23	1,460	rd. sh. drlg.
Prop. Service Corp., No. 1 Lloyd, Ventura Co.	24- 3-23	7,175	plug 7,110
Mosher, J. W., No. 1 Santa Paula, Ventura Co.	22- 4-21	2,300	will test
Standard Oil Co., No. 1 Lost Hills, Kern Co.	2-26-20	....	bldg. rig
General Pet., No. 1 South Belridge, Kern Co.	30-28-21	11,377	suspended
Union Oil Co., No. 18 North Belridge, Kern Co.	36-27-20	8,523	redrlg. 7,900
Standard Oil Co., No. 1-A North Belridge, Kern Co.	36-27-20	6,371	sd. sh. drlg.
Standard Oil Co., No. 2 North Belridge, Kern Co.	36-27-20	5,671	cleaning out
Amerada Pet., No. 1 Blackwells Corner, Kern Co.	17-26-19	2,690	prod. test
Standard Oil Co., No. 1 Delano, Kern Co.	1-25-23	....	bldg. rig
Trico Oil & Gas Co., No. 1 Alpaugh, Kern Co.	3-25-23	2,525	gas, shut in
Trico Oil & Gas Co.'s No. 3 Alpaugh, Kern Co.	36-24-22	....	rigging up
Buckeye Union Oil Co., No. 2 McVan, Kern Co.	10-27-27	1,340	O.S. drlg.
Hancock Oil Co., No. 4 Mountain View, Kern Co.	14-30-28	....	bldg. rig
Associated Oil Co., No. 1 Mountain View, Kern Co.	3-31-29	5,240	sd. sh. drlg.
Star Pet. Corp., No. 1 Mountain View, Kern Co.	10-30-28	3,471	sd. sh. drlg.
Union Oil Co., No. 4 Mountain View, Kern Co.	15-30-28	5,525	suspended
Union Oil Co., No. 5 Mountain View, Kern Co.	15-30-28	5,474	suspended
Union Oil Co., No. 6 Mountain View, Kern Co.	9-30-28	3,270	sd. sh. drlg.
General Petroleum, No. 3 Mountain View, Kern Co.	14-30-28	....	bldg. rig
The Texas Co., No. 4 Mountain View, Kern Co.	14-30-28	3,192	sd. sh. drlg.
Barnsdall, No. 3 Mountain View, Kern Co.	31-30-29	6,830	sd. sh. drlg.
Hogan Pet., No. 6 Mountain View, Kern Co.	4-31-29	4,701	sd. sh. drlg.
Standard Oil Co., No. 4 Mountain View, Kern Co.	23-30-28	5,477	flow 1,406 b.d.
Standard Oil Co., No. 5 Mountain View, Kern Co.	24-30-28	....	bldg. rig
Ohio Oil Co., No. 1 Mountain View, Kern Co.	33-30-29	3,380	sd. sh. drlg.
National Oil Co., No. 1 Mountain View, Kern Co.	30-30-29	5,604	redrlg. 5,570
Mountain View Oil Co., No. 1 Mountain View, Kern Co.	25-30-28	3,890	sd. sh. drlg.
Gilmore-Snyder Oil Co., No. 2 Mountain View, Kern Co.	24-30-28	4,830	sd. sh. drlg.
Gilco, Inc., No. 2 Edison, Kern Co.	23-30-30	1,915	comp. 80 b.d.
Jergins Trust, No. 4 Edison, Kern Co.	23-30-29	3,488	schist
Consd. Crude Oil Co., No. 1 Edison, Kern Co.	17-30-29	4,100	sd. sh. drlg.
Ohio Oil Co., No. 1 Edison, Kern Co.	36-30-29	911	sd. sh. drlg.
Shell Oil Co., No. 2 Edison, Kern Co.	15-30-29	3,794	flow 97 b.d.
Shell Oil Co., No. 3 Edison, Kern Co.	14-30-29	3,047	P.B. 2,900
Shell Oil Co., No. 4 Edison, Kern Co.	21-30-29	....	bldg. rig
Monterey Expl. Co., No. 5 Edison, Kern Co.	15-30-29	2,576	cmtd.
The Texas Co., No. 1 Edison, Kern Co.	4-30-29	2,877	will plug
Foster, Inc., No. 1 Edison, Kern Co.	8-30-29	500	cmtd.
General Pet., No. 2 Edison, Kern Co.	15-30-29	2,989	P.B. 2,906
Surety Oil Co., No. 1 Edison, Kern Co.	32-29-29	....	rig, suspended
Petroleum Drilling Co., No. 1 Edison, Kern Co.	22-29-29	461	sd. sh. drlg.
Signal Oil & Gas Co., No. 1 Edison, Kern Co.	31-29-30	1,550	sd. sh. drlg.
Signal Oil & Gas Co., No. 2 Edison, Kern Co.	5-30-30	....	material
Caravel Pet., No. 1 Sivert, Kern Co.	19-30-30	1,925	suspended
Sea Cliff Oil Co., No. 1 Greenfield, Kern Co.	7-31-28	608	sd. sh. drlg.
Tejon Ridge Oil Co., No. 1 Comanche, Kern Co.	23-32-29	1,582	suspended
Standard Oil Co., No. 1 Semi-Tropic, Kern Co.	8-27-23	1,483	sd. sh. drlg.
Seeple, J. O., No. 1 Elk Hills, Kern Co.	5-30-24	....	rigged up
Richfield Oil Co., No. 2 Devil's Den, Kern Co.	14-25-18	630	sd. sh. drlg.
The Texas Co.'s No. 1 Temblor, Kern Co.	29-29-21	2,580	br. sh. drlg.
Shell Oil Co., No. 1 Buena Vista, Kern Co.	9-32-25	2,392	sd. sh. drlg.
Reserve Oil & Gas Co., No. 1 Tejon, Kern Co.	2-10-19	291	sd. sh. drlg.
Badger Oil Co., No. 1 Tejon, Kern Co.	31-11-19	6,248	suspended
Russ Oil Synd., No. 1 Dos Palos, Fresno Co.	28-12-11	4,514	suspended
Bergman, Harry, No. 1 Dos Palos, Fresno Co.	12-12-11	6,138	suspended
Union Oil Co., No. 1 Lillis-Kettleman, Fresno Co.	24-21-16	10,944	fish. D.P.
K.N.D.A., No. 56, Kettleman, Kings Co.	8-22-18	10,154	redrlg. 9,224
The Texas Co., No. 1 Coalinga, Fresno Co.	35-20-14	1,320	sd. sh. drlg.
Farrel Pet., well No. 1, San Luis Obispo Co.	18-31-13	1,432	hd. sh. drlg.
Willett Oil Co., No. 1 Cholame, San Luis Obispo Co.	10-25-15	3,605	to recmt.
Commonwealth Consd. Gas Co., No. 1 Tulare Lake, Kings.	21-22-20	2,490	gas, shut in
Commonwealth Consd. Gas Co., No. 2 Tulare Lake, Kings.	21-22-20	....	rig, suspended
Kettleman Pac. Oil Co., No. 1 Tulare Lake, Kings Co.	11-23-16	812	sd. sh. drlg.
General Pet., No. 1 Devil's Den, Kings Co.	20-24-18	....	rig, suspended
Buttes Oilfields Co., No. 2 Marysville, Sutter Co.	35-16- 1	6,774	hd. sh. drlg.
Amerada Pet., No. 1 P.L.D., San Joaquin Co.	15- 3- 5	....	material
Pure Oil Co., No. 1 Chowchilla, Madera Co.	7-10-14	8,220	fishing
Northern Counties Pet., No. 1 Tehama, Tehama Co.	25-24- 3	2,420	hd. sh. drlg.
The Texas Co., No. 1 Petrolia, Humboldt Co.	1- 3- 2	1,117	reaming

IMPORTANT SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S. T. R.	Depth	Status—
Speik, F. A., No. 1 Athens, Los Angeles Co.	2- 3-14	2,780	sd. sh. drlg.
Lennox Oilfields Co., No. 1 Hawthorne, Los Angeles Co.	9- 3-14	....	material
Ackerman, J. M., No. 1 Athens, Los Angeles Co.	18- 3-14	....	rigging up
Macrate, A. N., No. 1 Athens, Los Angeles Co.	18- 3-14	5,950	sd. sh. drlg.
Hillside Oil Co., No. 1 Hermosa, Los Angeles Co.	31- 3-14	....	grade
Wilshire Oil Co., No. 2 Petrero Deep, Los Angeles Co.	27- 2-14	7,995	cmtd. 5 times
Trinity Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	....	bldg. rig
Madison Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	....	rigged up
Mammoth Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	....	rigging up
Fourl, C. W., No. 2 Del Rey, Los Angeles Co.	27- 2-15	....	rigging up
Dunlap, D. D., No. 1 Del Rey, Los Angeles Co.	27- 2-15	862	sd. sh. drlg.
Pacific Drlg. Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	....	rigging up
Union Oil Co., No. 6 Del Rey, Los Angeles Co.	27- 2-15	5,910	sd. sh. drlg.
Union Oil Co., No. 7 Del Rey, Los Angeles Co.	27- 2-15	180	sd. drlg.
Big Ben Oil Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	5,341	sd. sh. drlg.
Bethlehem Expl. Co., No. 1 Manhattan, Los Angeles Co.	30- 3-14	5,304	suspended
Staple Oil Co., No. 1 Manhattan, Los Angeles Co.	24- 3-15	6,671	sd. sh. drlg.
Partridge & Chambers, No. 1 Whittier, Los Angeles Co.	22- 2-11	....	location
Universal Consd. No. 4 Montebello Deep, Los Angeles Co.	6- 2-11	4,410	sd. sh. drlg.
Shively, N. O., No. 1 Puente Hills, Los Angeles Co.	23- 2-10	2,742	sd. sh. drlg.
Pressel & Tull, No. 1 Puente Hills, Los Angeles Co.	30- 2- 9	4,174	hd. sd. drlg.
International Dev. Co., No. 1 Saugus, Los Angeles Co.	34- 5-16	4,270	hd. sh. drlg.
Barstow Oil Co., No. 1 Castaic, Los Angeles Co.	35- 5-16	3,265	suspended
Republic Pet. Co., No. 1 Newhall, Los Angeles Co.	6- 3-15	208	sd. sh. drlg.
Black Eagle Oil Co., No. 1 Huntington, Orange Co.	tideland	4,702	cmtd. 4,243
Explorers Drlg. Co., No. 1 Fairview, Orange Co.	9- 6-10	945	test W.S.O.
Nuoil Co., No. 1 Newport, Orange Co.	29- 6-10	6,485	bailing
B. & B. Oil Co., No. 1 Newport, Orange Co.	19- 6-10	3,740	sd. sh. drlg.
Shannon, C. G., No. 1 Yorba, Orange Co.	21- 3- 9	5,777	rigging up
Great American Pet. Co., No. 2 East Coyote, Orange Co.	19- 3- 9	3,133	cmtd. 3,152
Bartholomae Oil Co., No. 2 East Coyote, Orange Co.	22- 3-10	....	rig, suspended
Great American Pet. Co., No. 1 Chino, San Bernardino.	18- 2- 8	2,462	suspended
Great American Pet. Co., No. 3 Chino, San Bernardino.	7- 2- 8	313	suspended
Tehama Pet., No. 1 Santa Ana Canyon, San Bernardino.	33- 2- 8	2,698	P.B. 2,381
San Diego Pet. Co., No. 1 Chula Vista, San Diego Co.	32-18- 2	6,333	cmtd.
Edmonds, E. A., No. 1 Trustee, San Diego Co.	29-15- 3	2,431	hd. sd. drlg.
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co.	36- 5- 5	596	hd. sd. drlg.
Corona Oil Co., No. 1 Corona, Riverside Co.	27- 3- 7	....	rigging up

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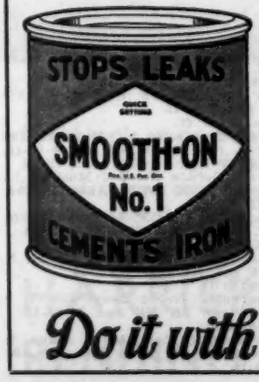

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Arkansas Leads in Completions and Producers; Five in the Rainbow Field, Union County

By J. R. CRUMPTON
Staff Correspondent, Louisiana-Arkansas

SHREVEPORT, La., Jan. 14.—The Arkansas district led the four other districts in this division in completions and percentage of producers during the past week, reporting seven completed wells, six of which were oil wells, five of the latter being in the Rainbow Field in Union County. The latter area, although not registering any large flowing wells from the lower horizon, was more consistent than any seven-day period since the discovery of the new producing horizon. The wildcats in all of the districts made little progress and developed nothing of interest. New wildcat locations staked, both in the North Louisiana and Arkansas areas, continues at about an even rate with the last six months, but announcement was made of further wildcatting on two North Louisiana blocks where geology and past drilling operations put the particular areas in the spotlight as possible new fields.

ARKANSAS

The seven producers in the Rainbow Field were confined to Sections 10 and 11 in the immediate proven territory of the lower red bed producing level. J. E. Crosbie, Inc.'s Uo. 1 E. F. Gregory, Section 10-17-14, is flowing 100 bbls. daily through 2½-inch tubing from a total depth of 3,347 feet. Oil sand was cored from 3,342-47 feet. H. L. Hunt, Inc.'s No. 12 E. F. Gregory, Section 10-17-14, gauged 10,000,000 feet of gas with 700 pounds rock pressure and is making 75 bbls. of oil daily from 3,338 feet. Seven-inch casing was set in this well during the past week before testing at 3,286 feet. The same operators' No. 14 E. F. Gregory, Section 11-17-14, is flowing 75 bbls. of pipe line oil from 3,331 feet. Two completed wells in the Rainbow area failed to make pipe line producers. The Lion Oil Refining Co.'s No. 1-A J. M. Gregory, Section 11-17-14, is flowing 106 bbls. of fluid, 40 per cent of which is salt water, through 2½-inch tubing from 3,355 feet. The S. H. A. Oil Co.'s No. 2 Hunt, Section 10-17-14, an offset to the discovery well, is pumping 150 bbls. of fluid, 75 per cent salt water from 3,467 feet. The above results just about tell the story of the lower red beds producing levels of the Rainbow Field. Since the first well was brought in several months ago, the completed wells have been brought in from various streaks of sand from 60 to 160 feet below the original production in this area.

The sixth producer in the Arkansas district was reported on the flank of the Stephens Field in Nevada County. O. F. Whittaker's No. 1 J. Wesley, Section 2-15-20, is pumping 10 bbls. daily from 2,142 feet. The only dry hole reported from this district was from Lafayette County. Douglas Lown's No. 1 Camp, Section 14-15-23, was abandoned as dry in red shale at a total depth of 3,010 feet. This well has been shut down for several months and it is understood that the original operator is making arrangements to reassemble the block with some additional acreage and will make a contract to drill a test to 4,500 or 5,000 feet in the upper Trinity series.

Ouachita County

In Ouachita County about 5 miles west of the town of Camden, T. J. Gaughan has staked location for his No. 2 M. Bragg in Section 25-13-18. The same operators' No. 1 M. Bragg, a wildcat, was completed recently as a 50-bbl. pumper of 17.2 gravity oil from 1,369 feet. The second test in this area, an offset about 600 feet north of the discovery well, failed to log the pay sand, and drilled deeper. The latter, T. J. Gaughan's No. 1 Cartier, Section 25-13-18, tested with no show at 1,390 feet and is now shut down waiting orders in red shale at 2,500 feet. One other test for that area of Ouachita County has recently been staked. Lovett & Darwin's No. 1 James Boyd, Section 17-13-17, has derrick up on location. In Lonoke County J. G. Strahan's No. 1 Hardin, Section 18-2s-7w, is drilling in gumbo at 1,297 feet. This test has been inactive for several months, having been shut down around the 900-foot level and was reported in these columns as abandoned. Other wildcats in the Arkansas district follow: Arkansas County, Grand Prairie Realty Co.'s No. 1 Fischer, Section 6-6s-4w, fishing for swab at 1,724 feet, and report 7 feet of sand showing oil at that depth; Calhoun County, P. J. McMurray's No. 2 Calion Lumber Co., Section 33-15-14, drilling in chalk rock at 2,350 feet; in the small Bradley Field, southern part of Lafayette County, W. H. Harvey's No. 2 Allen, Section 18-19-24, drilling at 2,250 feet.

NORTH LOUISIANA

This district reported only four completions consisting of two gas wells and two dry holes, the latter in the north central part of the state. The gas wells were in separate areas of the Monroe Field. In Ouachita Parish, Carbons Consolidated's No. 6 fee, Section 14-19-5e, gauged 1,500,000 feet of gas, 800 pounds rock pressure, from 2,299 feet. In the Union Parish area of the same field, Interstate Natural Gas Co.'s No. 1 Jenney, Section 7-20-4e, gauged an initial open flow of 12,000,000 feet of dry gas with 820 pounds rock pressure from a total depth of 2,148 feet. An Avoyelles Parish shallow test was abandoned when Bell Oil Co.'s No. 1 T. J. Woodley, Section 11-2n-5e, had barren results at 2,121 feet. The same operators have staked location for its No. 1 Thompson-Koltz in the northwest corner of the same section. A wildcat test in Grant Parish has been shut down since June of last year and was officially abandoned as dry at a total depth of 2,360 feet.

The North Louisiana area reported seven new locations, four of which were wildcats. In addition to the one listed above in Avoyelles Parish, J. C. King has location for No. 1 Odis Webb, Section 21-21-8, in Claiborne Parish. In DeSoto Parish, P. G. Fraley and others have derrick up on No. 1 J. R. Stell in Section 5-12-16, and Leslie Production Co. is rigging up on No. 1 J. W. Ramsey in Section 36-11-11. Two new operations were announced in the Urania Field, La Salle Parish, and one was staked in the Converse area of Sabine Parish.

Caddo and DeSoto Parishes continue to lead the other North Louisiana areas in active drilling, the former having most of its drilling rigs in old proven territory. This parish was the first producing area in Louisiana, the first well being brought in in the old Caddo Field more than 25 years ago. The DeSoto tests are mostly in wildcat areas, several of them looking for shallow chalk rock production. A Claiborne Parish test about 6 miles southeost of the Haynesville Blossom sand field has been causing more than a ripple of excitement during the past week, but last reports just about checks it out as a producer from the Blossom horizon. J. K. Wadley's No. 1 W. W. Moreland, Section 2-22-7, logged the top of the Arkadelphia at 2,003 feet, top of Nacatoch at 2,054 feet, base of chalk rock at 2,627 feet, top of Blossom at 2,872 feet, top of Tokio at 3,190 feet. The test is shut down waiting orders at 3,300 feet. A promising block of acreage south of the town of Sibley, known locally as the Dubberly High, and originally blocked by J. P. Evans, independent operator of Shreveport, is reported to experience more drilling in the near future. Three wells were drilled on this block during the past year to the Blossom and Woodbine sands, all of which showed good sand bodies, and the new operations which will be carried on by a prominent major company proposes to either deepen the highest checking well previously drilled on the block, or to drill another on a potential high, the test to be to the Trinity series. Another block originally blocked by the same operator southeast of Simmsboro in Lincoln Parish and on which test was drilled is also reported to be due further exploring. The test on this block was drilled by the Eastern Texas Production Co. and reports state that the Skelly Oil Co. will take over a part of the acreage and deepen the first well or drill another to the Trinity horizon.

Wildcat Operations in Louisiana-Arkansas

(Rotary operations unless otherwise designated)

NORTH LOUISIANA

AVOYELLES PARISH

Bell Oil Co.'s No. 1 Woodley, 330 ft. S and W NE cor. NW Sec. 11-2n-5e.
Dry and abd. 2,121 ft.

BIENVILLE PARISH

M. V. Duncan et al's No. 1 Hutton, 400 ft. S. 330 ft. E. NW cor. Sec. 4-18-7.
S.D. 1,570 ft.

Saline Drlg. Co.'s No. 1 Pardee, Sec. 27-14-6.
S.D. 2,670 ft.

BOSSIER PARISH

Howard & Baird's No. 1 Gold, 150 ft. S and E. NW cor. Sec. 36-20-13.
S.D. 1,126 ft.

W. A. Kirkland's No. 1 Jarrett & McKeller, 330 ft. N and W. S cor. NW NW Sec. 3-21-13.
Set 10-in. 43 ft.

Leonard Co.'s No. 1 Pearson, 250 ft. S and E. of C Sec. 22-21-14.
S.D. for fuel 2,405 ft.

Scott & Howard's No. 1 Sherrill, Sec. 13-19-12.
Partly rigged up and S.D.

R. L. Skidmore et al's No. 1 Davis, Sec. 12-18-13.
S.D. 1,015 ft.

CADDO PARISH

W. T. Bell et al's No. 1 Bostick, 1,320 ft. E. 660 ft. N, SW cor. Sec. 12-22-16.
S.D. 2,540 ft.

Burkett O. & G. Co.'s No. 1 Lindholm, 400 ft. S and E, NW cor. NE SE Sec. 16-17-14.
S.D. 1,046 ft., repairing rig.

A. D. King, tr.'s No. 1 Roach, 641 ft. E, 375 ft. N, SW cor. SE Sec. 4-14-16.
S.D. 2,128 ft.

M. Rodgers' No. 4 Muslow, 1,495 ft. S, 1,270 ft. W, C Sec. 4-20-15.
Set 4½-in. 2,140 ft.

Shreveport Oil Corp.'s No. 2-C Muslow, 1,106 ft. E. 280 ft. N. SW cor. NW Sec. 4-20-15.
W.O.S.R. 2,155 ft.

Shreveport Oil Corp.'s No. 4-C Muslow, 1,720 ft. E. 100 ft. N, SW cor. Sec. 4-20-15.
Drlg. 1,202 ft.

Leonard Co.'s No. 4 S. P. Harrell, 220 ft. N and W, SE cor. NW SW Sec. 2-21-16.
Set 5 3/16-in., 1,070 ft.

Tooke & Reynolds' No. 1 Levy, 330 ft. N and W, SE cor. NE Sec. 16-20-15.
Set 6-in. 2,170 ft.

Tooke & Reynolds' No. 2 Levy, 300 ft. S and E. NW cor. SE NE Sec. 16-20-15.
Derrick pattern.

J. I. Roberts Drlg. Co.'s No. 1 Lane & Simon, 480 ft. E, 150 ft. S, NW cor. SW Sec. 15-20-15.
Set 7-in. 2,163 ft.; T.D. 2,195 ft.

Press & Lambert's No. 1 Lane & Simon, 166 ft. S, 1,124 ft. E, NW cor. SW Sec. 15-20-15.
Coring 2,185 ft.

CATAHOULA PARISH

T. R. Hincy's No. 1 La. Central Lbr. Co., Sec. 32-9-6e.
S.D. for D.S. 1,541 ft.

CLAIBORNE PARISH

J. K. Wadley et al's No. 1 Moreland, 330 ft. N and E. SW cor. SE NE Sec. 2-22-7.
S.D.; W.O. 3,300 ft.

DESOTO PARISH

Bayou Pierre Oil Co.'s No. 1 B. Y. Wemple, C SE NE SW Sec. 14-12-11.
W.O.S.R. 2,731 ft.

Century O. & Drlg. Co.'s No. 1 Morton, 300 ft. N and E SW cor. SE NE Sec. 27-11-14.
S.D. 2,612 ft.

Dempsey & Manziel's No. 1 Thigpen, 375 ft. S, 330 ft. W, NE cor. SW NE Sec. 33-13-13.
Testing 1,730 ft.

DeSoto Pet. Co.'s No. 1 B. Y. Wemple, C S½ SE NE SW Sec. 14-12-11.
S.D. 2,073 ft.

E. L. Foster's No. 1 Youngblood, Sec. 9-11-14.
S.D. 1,830 ft.

Bailey Gaunce's No. 2 B. F. Jenkins, Sec. 35-13-12; O.W.D.D.
Drlg. 2,150 ft.

Hester et al's No. 1 Alston, 330 ft. S and W of center of Sec. 11-11-16.
D.S. stuck 2,620 ft.

George Le Grande's No. 1 Vance 180 ft. N and W SE cor. SW Sec. 34-12-16.
Csg. collapsed; S.D. 2,707 ft.

Leslie Prod. Co.'s No. 1 Ramsey, 150 ft. N and W of C Sec. 36-11-11.
Rigging up.

Ben F. Smith's No. 1 Bonds, 200 ft. E, 500 ft. N, SW cor. Sec. 23-12-11.
Running sand pump 2,742 ft.

National Oils, Inc.'s No. 1 B. Y. Wemple, NW SW Sec. 14-12-11.
S.D. 120 ft.

EAST CARROLL PARISH

Century Oil & Drlg. Co.'s No. 1 Olive Dell, 660 ft. S, 300 ft. W, NE cor. Sec. 56-21-21e.
Drlg. 150 ft.

LA SALLE PARISH

J. B. Collins, tr.'s No. 2 Urania, Sec. 7-10-2e.
Rigging up.

Fred Graham's No. 1 Urania, 300 ft. N, 150 ft. E, SW cor. SW NW Sec. 18-10-2e.
Drlg. 1,385 ft.

F. A. Trichello's No. 1 Urania, Sec. 3-9-1e.
S.D. 1,491 ft.

(Continued on Page 76)

NORTHEASTERN ARKANSAS

P. J. Hojer of Oklahoma City, Okla., reports he has taken leases on a block of 50,000 acres in Prairie and Monroe Counties in Arkansas in the DeValls Bluff region, and is seeking to interest capital in testing out the region for oil. The block lies in that part of the state described by A. F. Crider in a report made for C. E. Harris, conservation agent for the Arkansas Board of Conservation, and published April 19, 1934, in The Oil and Gas Journal.

Joe C. Strahan is drilling a test in NW NW Section 18-2s-7w, in Lonoke County, which lies west of Prairie City, and is at a depth below 1,500 feet.

Crude Production

Estimated daily crude production for the week ended January 12 follows:

NORTH LOUISIANA

Bellevue	530
Caddo Light	4,875
Caddo Heavy	1,705
Converse	1,255
Cotton Valley	480
De Soto and Red River	1,440
Elm Grove	390
Haynesville	3,690
Holly	175
Homer	2,665
Pleasant Hill	195
Sarepta-Carterville	875
Urania	3,310
Zwolle	2,570
Total	23,855

SOUTH ARKANSAS

Champagnolle	2,750
El Dorado	2,225
Lisbon	340
Miller County	1,190
Nevada	935
Smackover Light	2,275
Smackover Heavy	18,385
Stephens	670
Urbana	2,275
Total	30,935

Famous Firsts in the Oil Fields

● Many notable firsts in the oil fields have been contributed by Harrisburg. Illustrated at right are some examples of Harrisburg developments: the seamless steel pipe coupling; the seamless steel precision ground pump liner; the steel pipe flange with electro-galvanized threads.

Harrisburg is frankly proud of its traditional leadership in the development of seamless and forged steel products for the oil fields . . . . .

Edwin Laurentine Drake drilled the first commercial oil well which came in on August 27th, '859 He thus founded an industry representing billions of invested capital. This well is located on the bank of Oil Creek near Titusville, Pennsylvania. Time and experience have produced remarkable results in the oil fields while youth provides the spark to keep this great industry facing forward.

Forty years ago the Harrisburg Pipe and Pipe Bending Company was founded. Here as in the oil fields remarkable developments have been noted. Today Harrisburg services the oil fields with the finest forged and seamless steel products it is possible to manufacture. Today the name Harrisburg is synonymous with quality. Harrisburg manufactures seamless steel pipe couplings, drop forged steel flanges, seamless steel pump liners, bull plugs and drop forged tool joints are used. Harrisburg is proud to devote its energies to the service of a vital and wonderful industry.

HARRISBURG PIPE & PIPE BENDING CO., Harrisburg, Pa.

Haury-Burrton, in Reno County, Now Leads All Kansas Pools in Production; New Big Wells

By JAMES McINTYRE

The Haury-Burrton Pool in eastern Reno County, Kansas, is now the largest single producing field in the State. It averaged 16,624 bbls. per day last week. One of the week's completions in that pool started off at 4,909 bbls. a day on a potential test.

An important new well not yet a completion is Stearns & Streeter and J. J. Hall's No. 2 Miller, SE cor. Section 30-14-13w, Russell County, which swabbed 150 bbls. in three hours from Siliceous lime at 3,154 feet with the pay hardly scratched.

Barnsdall Oil Co.'s No. 3-C Sabin, NE NE SE Section 11-23-4w, in the Haury-Burrton Pool, flowed nearly 7,500 bbls. per day from Hunton lime. It was not completed.

Estimated Production

Estimated daily average production of Kansas for the week ending January 12 and for the preceding week follows:

	Barrels	
	Jan. 12	Jan. 5
Hollow	6,875	6,750
Ritz-Canton	9,250	11,700
Voshell	5,500	4,925
Johnson	2,110	2,140
Nikkell	6,100	6,225
Sedgwick County	5,550	5,575
Ellsworth County	3,579	2,935
Barton County	1,163	2,120
Rice County	16,647	17,200
Reno Coun.y	16,943	14,510
Ellis County	524	410
Kingman County	920	1,090
Stafford County	1,777	1,210
Russell County	8,275	8,275
Greenwood County	11,500	11,500
Butler County	18,900	18,600
Other pools	19,137	19,435
Total Kansas	137,750	137,550

Following is the record of completed wells, and new operations started in the State in the past week in review:

Butler County

R. L. Hodge's No. 1-A Glaze, SE NE SE Section 4-29-4, logged Kansas City lime 1,774-83 feet, total depth, pumping 50 bbls. of oil and a show of water. It was plugged back to 1,782 feet, acidized and completed for 130 bbls. of oil.

Hammer & McClean's No. 12 Bates, C W half SW SW Section 10-27-4, was completed for 40 bbls. of oil in the Kansas City lime found at 1,968-2,017 feet. total depth.

Sheldon Drilling Co. and others' No. 1 Wilson, SE NW SW Section 12-25-3, had top of Mississippi lime at 2,664 feet, getting an oil show from 2,680-82 feet and a hole full of water at 2,768 feet, total depth. It was dry and abandoned.

First reports in Butler County were as follows: Rex Drilling Co. and others' No. 2 DeMoss, NW NE NW Section 8-28-7, 6-inch casing set at 2,121 feet, cleaning out; Vickers Petroleum Co.'s No. 1 McCraner-"C," CEL W half NW NW Section 1-25-3, rigging up.

Cowley County

Ben Gralapp's No. 1 Kukuk, SW NW Section 6-33-4, topped chat at 3,297 feet and was dry and abandoned at 3,397 feet, total depth.

Greenwood County

Arthur Lykes and others' No. 2 Beauchat, SW NE SW SE Section 5-14-12, shot sand 1,617-31 feet, total depth, with 40 quarts and was completed for 20 bbls. initially.

Henderson & Holden's No. 5 Harlan, CNL S half NW NW Section 34-22-11, logged sands 1,860-71 feet and 1,928-60 feet which was shot with 200 quarts and completed for 25 bbls. of oil. Total depth was 1,967 feet.

Greenwood County first reports follow: A. M. Landon's No. 3 Parish, SE SW NE Section 16-24-12, drilling 400 feet; York State Oil Co.'s No. 14 DeMalorie, C SE NW Section 32-22-11, drilling 1,800 feet.

McPherson County

Dickey Oil Co.'s No. 1 Tull, NE SW Section 13-19-3w, Johnson Pool, was completed in chat formation at 2,957-3,006 feet, total depth, for 756 bbls. of fluid in 24 hours, 15 per cent water.

Roth & Farrout's No. 2 Carlson, NW NE Section 24-19-3w, was an abandoned location.

Shell Petroleum Corp.'s No. 2 Lawrence, an old well deepened and located in the SW NE NW Section 25-19-3w, failing to get production in the Viola, Simpson and Siliceous lime formations was plugged back from 3,554 feet, total depth, to the chat formation 3,052-3,119 feet and was completed. It produced 60 bbls. of oil and 60 bbls. of water.

Shell Petroleum Corp.'s No. 3 Hull, NE SE SW Section 11-19-2w, Ritz Pool, had Viola lime from 3,363-81 feet, total depth, and was completed after acid treatment for a potential gauge of 554 bbls. of oil and 280 bbls. of water.

Lario Oil & Gas Co.'s No. 2 Miller, NW SE Section 24-19-2w, was abandoned at 3,407 feet, total depth, account of fishing job. It was to have been drilled deeper.

First reports in McPherson County for the week are as follows: Dickey Oil Co.'s No. 2 Tull, SE NE SW Section 13-19-3w, cellar; Mead Brothers and others' No. 1 Chindberg, SE NW SE Section 19-18-2w, ponds; Tom Palmer's No. 1 Lundberg, NW NE Section 30-18-2w, location.

Reno County

Barnsdall Oil Co. completed No. 5 Sabin-"C," SW SE Section 11-23-4w, Burrton-Haury Pool. It had Hunton lime at 3,592-3,602 feet, total depth, and produced 1,820 bbls. of oil after a heavy acid treatment.

Skelly Oil Co.'s No. 3 Sabin, NE SE SW Section 11-23-4w, swabbed 80 bbls. of oil in eight hours from Hunton lime 3,602-23 feet. It was then acidized tanking 755 bbls. of oil, cutting 1 per cent. It was completed at a total depth of 3,625 feet.

Derby Oil Co.'s No. 2 Ackley, NW SE Section 14-23-4w, flowed 4,909 bbls. of oil in 24 hours for its completed gauge. Hunton lime was encountered from 3,594-99 feet, total depth.

Deal Oil & Gas Co. and others' No. 2 McElwain, NE SE Section 34-23-4w, Burrton-Haury Pool, had Hunton lime 3,582-88 feet, total depth, flowing 1,004 bbls. in 24 hours before acidizing. After acidizing it was completed for 1,582 bbls.

All new work in Reno County was confined to the Burrton-Haury area. The list follows: Olson Drilling Co. and Shell Petroleum Corp.'s No. 2 Harner, NE NW Section 14-23-4w, location; Marathon Oil Co.'s No. 3 Vansickle, SE NW Section 23-23-4w, material; Olson Drilling Co., Shell Petroleum Corp. and Continental Oil Co.'s No. 6 Blake, NW NE SW Section 23-23-4w, rig; Olson Drilling Co., Shell Petroleum Corp. and Continental Oil Co.'s No. 7 Blake, NE NW Section 23-23-4w, material; Olson Drilling Co., Shell Petroleum Corp. and Continental Oil Co.'s No. 8 Blake, NW SE Section 23-23-4w, material; Olson Drilling Co. and Shell Petroleum Corp.'s No. 4 Duckworth, SW NE Section 23-23-4w, material; Deal Oil & Gas Co. and others' No. 3 McElwain, NW NE SE Section 34-23-4w, rig; Olson Drilling Co. and Shell Petroleum Corp.'s No. 2 England, NE NW SE Section 34-23-4w, location.

Rice County

Sinclair Prairie Oil & Gas Co.'s No. 3 Volkland, SE cor. Section 20-19-9w, Beyers Pool, was completed for 1,446 bbls. of oil in Siliceous lime encountered from 3,191-3,201 feet, total depth.

Empire Oil & Refining Co.'s No. 1 Grove, SW NE Section 29-19-9w, Grove Pool, potentialed 1,135 bbls. of oil in 24 hours for its completed gauge. It is producing from Siliceous lime 3,221-27 feet, total depth.

Moore, Blankenship and others' No. 1 Browning, NE SE NE Section 31-19-9w, a rig was abandoned.

Location for Stark and Wells' No. 1 Smith, NW cor. Section 30-19-8w, Rice County, was abandoned.

Atlantic Oil Producing Co.'s No. 1 J. Rolfs, SE NE SE Section 14-17-9w, Rolfs Pool, Ellsworth County, logged Siliceous lime from 3,193-98 feet, total depth, and was completed for 682 bbls. in 16 hours on the pump.

There were eight new operations started in Rice County during the week. They were: Gypsy Oil Co.'s No. 7 Christopher, C W half W half NE Section 6-20-9w, surface pipe cemented; Magnolia Petroleum Co.'s No. 2 Beyers, SW NW Section 21-19-9w, location; Gypsy Oil Co.'s No. 1 Callis, NW cor. Section 28-19-9w, building rig; Ira Keith's No. 2 Grove, NE SE NW Section 29-19-9w, rig; Shell Petroleum Corp. and others' No. 3 Ploog, C E half E half SW Section 33-18-9w, drilling 740 feet; Atlantic Oil Producing Co.'s No. 2 Rolfs, NE SE Section 14-17-9w, location; Carter Oil Co. and others' No. 1 Teubner, SE NW Section 26-17-9w, moving in material.

Russell County

Aylward Drilling Co. and others' No. 1 Mills, NW NE Section 4-14-15w, was completed in the Oswald lime 3,040-90 feet, total depth, gauging 228 bbls. of oil in 21 hours after a heavy shot of acid.

Central Petroleum Co.'s No. 1-B Benso, NE SE SW Section 4-14-15w, had Oswald lime 3,020-79 feet, total depth, which yielded 181 bbls. of oil in 24 hours after acid treatment. It was a completion.

Empire Oil & Refining Co.'s No. 1 Ehlrich, NE SE Section 28-13-14w, Russell Pool, was completed for 1,145 bbls. of oil in the Siliceous lime encountered at 3,274-78 feet, total depth.

New work in Russell County included: Signal Oil Co.'s No. 2 Sellens, NE SE NW Section 26-15-13w, cellar; Stano-

(Continued on Page 73)

Wildcat Operations in Kansas

Week Ending January 12

(Descriptions are East unless marked otherwise)

BARBER COUNTY

Sam Jarvis et al's No. 1 Morrisse, C SE NE Sec. 23-30-10w.
Rig.

Southern Drlg. Co. et al's No. 1 Davis, 810 ft. from W and 330 ft. from S lines of NE Sec 13-34-15w.
Drlg. 2,045 ft.

BARTON COUNTY

D. I. Hall et al's No. 1 Arnold, SE SE SW Sec. 19-18-15w.
Rig.

Murphin and Downing's No. 1 Lanterman, NW SE Sec. 15-19-11w.
Siliceous lime 3,332 ft.; T.D. 3,355 ft.; 1,000 gals. acid; 185 bbls. oil in 16 hrs.

C. L. Price et al's No. 1 Ehrlich, NW SE Sec. 10-16-13w.
T.D. 360 ft.; fishing.

Treleaven & Brimm et al's No. 1 Haas, SW cor. Sec. 30-18-15w.
6-in. 3,225 ft.; fishing.

BUTLER COUNTY

Gaines et al's No. 1-A McKinley, NE NE SE Sec. 19-29-4.
Acidized K.C. lime 1,890-1,950 ft.; flowed 25 bbls. oil, 25 bbls. wtr.; acidized.

CLAY COUNTY

Seidel Bros.' No. 1 Younken, C S½ SE NW Sec. 21-9-4.
8-in. 1,378 ft.; drlg. 1,400 ft.

Severa et al's No. 1 Meyers, NE NW NW Sec. 4-10-4.
Mississippi lime 1,775 ft.; T.D. 1,824 ft.

COWLEY COUNTY

Ben Gralapp's No. 1 Kukuk, SW SW NW Sec. 6-33-4.
6-in. at 2,725 ft.; chat 3,297 ft.; T.D. 3,397 ft.; dry and abd.

Otstot et al's No. 1 Eckhardt, SE NW Sec. 15-35-6.
Spudded and S.D.

DICKINSON COUNTY

Dutch Oil Co.'s No. 1 Phillips, C NE NW Sec. 15-15-1e.
Drlg. 2,615 ft.

ELK COUNTY

Lassen's No. 1 Ferguson, SE SE SW Sec. 21-30-8.
1,760,000 ft. of gas 2,056-5 3ft.; 5-in. csg. 2,160 ft.; sand 2,169-76 ft.; acidizing.

GREENWOOD COUNTY

Kite et al's No. 1 Jamison, SW SE NE Sec. 30-26-13.
S.D. 525 ft.

HARVEY COUNTY

O. J. Connell et al's No. 1 Roth, SW cor. Sec. 16-22-2w.
Spudded and S.D.

Imo O. & G. Co. et al's No. 1 Sperling, SE NE NE Sec. 23-23-2.
Hunton lime 3,279-3,341 ft.; swbd. 7½ bbls. oil per hr.

Wenzel et al's No. 1 Schrag, NW SE Sec. 24-22-3w.
T.D. 587 ft.; S.D. for csg.

KINGMAN COUNTY

Magnolia Pet. Co.'s No. 1 Bartholomew, SE SE SW Sec. 30-27-4w.
Drlg. 3,105 ft.

McPHERSON COUNTY

Lario O. & G. Co.'s No. 1 Base, SW cor. Sec. 22-20-2w.
Chat 2,981 ft.; standardizing at 2,983 ft.

L. W. Prunty et al's No. 1 Davis, NE cor. Sec. 6-22-1w.
Drlg. 1,470 ft.

Roth-Faurot et al's No. 1 Bestwater, SE SW SE Sec. 23-20-1w.
Set 6-in. csg. 3,380 ft.; C.O.

Stafford et al's No. 1 Krehbiel, NW NW SE Sec. 27-21-2w; (O.W.D.D.).
C.O. at 2,080 ft.

NESS COUNTY

Texas Co. and Gypsy Oil Co.'s No. 1 Goodman, C SW SW Sec. 21-19-23w.
8-in. 4,055 ft.; drlg. 4,325 ft.

OSAGE COUNTY

Jim Edwards' No. 1 Detrich, C NW SE Sec. 21-14-15.
Spudded and S.D.

PRATT COUNTY

Atlantic Oil Prod. Co.'s No. 1 Prentice, C SE NW Sec. 18-28-14w.
Drlg. 1,700 ft.

RENO COUNTY

Foraker et al's No. 1 Hiett, SE SW NE Sec. 34-24-4w.
T.D. 1,285 ft.; S.D.

Kessler, Their and Skelly's No. 1 Bigger, NE SE SW Sec. 29-23-6w.
Rigging up.

Privett Drlg. Co.'s No. 1 Crotts, NE NW NE Sec. 27-26-10w.
8-in. 3,212 ft.; S.D. 3,285 ft.

RICE COUNTY

Allison & Fitzwilliams et al's No. 1 Stumps, NW NW SW Sec. 4-18-10w.
Rig.

Foraker, Nickerson et al's No. 1 Lyons, SE NW Sec. 27-20-8w.
S.D. 1,060 ft.

Gypsy Oil Co.'s No. 1 Dotson, SW SW NW Sec. 25-20-10w.
T.D. 3,004 ft.; Simpson 2,333 ft.; drlg. 3,345 ft.

Johnson & Carey et al's No. 1 Dyck, SE NE SE Sec. 35-22-5w.
Drlg. 2,830 ft.

Lario O. & G. Co. and Reserve Pet. Co.'s No. 1 Shepherd, SW SW NW Sec. 18-22-5w.
6-in. 3,720 ft.; U.R. 6-in. 3,787 ft.

(Continued on Page 74)

Deliveries to Calgary Refineries Gain; Year's Total Is Highest Since 1931

By VICTOR LAURISTON
Staff Correspondent, Canadian Fields

CHATHAM, Ontario, Jan. 12.—Deliveries to the Calgary refineries from the Turner Valley Field in December totaled 83,718 bbls., compared with 76,519 bbls. in November. Of the December output, 76,582 bbls. went to Imperial Oil Refineries, Ltd., and 7,136 bbls. to Bell Refining Co. The December total brings recorded deliveries for the year to 1,049,965 bbls., highest total since 1931. Actual production of the Turner Valley will likely exceed 1,150,000 bbls., as the delivery figures do not account for crude naphtha sold at the field and deliveries to some smaller refining plants. Deliveries in 1933 aggregated 745,802 bbls.

Saskatchewan Drilling

The latest official summary of drilling operations in Saskatchewan states that only one commercial well was brought in during 1934, Lloydminster Gas Co.'s No. 1, LSD 6, Section 11-50-28w, at Lloydminster. Preparations are being made to drill other wells in the vicinity and a definite site has been chosen for No. 2 in SW Section 12-50-28w3.

Six miles south of Hudson Bay Junction, in northern Saskatchewan, Trail Blazer Oil & Gas Co.'s No. 1, SW Section 32-44-3w2, encountered a heavy bituminous substance at 610 feet. No further work has been done but arrangements are being made to ship casing and control head and to drill other wells in the vicinity. It is not expected much further will be done until spring.

In the Simpson area, Simpson Oil Co.'s No. 2 is below 200 feet with an 18-inch hole. Drilling will be continued through the winter. The site was chosen as a result of careful test drilling, the geology having been reported on for the company by Dr. J. O. G. Sanderson of Calgary and F. H. Edmunds of the University of Saskatchewan.

Near Unity, Golden Ridge Oil & Gas Co. is preparing to drill acreage formerly held by Unity Valley Oil & Gas Co.

Twin Provinces Oil & Gas Co. is preparing to drill acreage formerly held by Unity Valley Oil & Gas Co.

Twin Provinces Oil & Gas Co., whose holdings are 20 miles west of Maple Creek, in the southwestern portion of the province, have shut down for the winter after reaching 2,200 feet. Blackfoot Oil & Gas Co.'s No. 1, some 10 miles south of Wilcox, is at 1,750 feet and may continue drilling this winter.

Riverhurst Oil & Gas Co. started a test for gas late this fall, but has suspended operations till next spring. Location is near the village of Riverhurst.

Drilling in Ontario

In the De Clute Field, Kent County, Ontario, Gas Producers' Syndicate's No. 2, Gilbert Pardo lease, Raleigh Township, 2½ miles west of Cedar Springs, has been finished at 1,542 feet with a natural flow of 5,500,000 feet a day. No. 3 has been spotted approximately 1,100 feet south of No. 2 on the same lease, and will start work in a few days.

In the Tilbury Field, Kent County, R. L. Pattinson's No. 1, Jones farm, N. Lot 169, Talbot Road, Tilbury East Township, is a small gasser at around 1,400 feet, and will be shot.

In the Dover Field, Kent County, Prairie Oil & Gas Co.'s No. 2, Stephens farm, Lot 2, Front Concession, Dover East Township, is in the Trenton below 3,240 feet without a show and will probably be abandoned. Medina Natural Gas Co.'s No. 1, Stirling lease, E. Lot 1, Concession 4, Dover East Township, is below 1,690 feet. F. H. Stover & Son's No. 3 has been spotted on the Peter Jubenville farm, Lot 3, Front Concession, some 800 feet north of No. 1 gasser, but may not start drilling for two months.

In the Eden Field, on the Norfolk-Elgin county line, E. P. Rowe's No. 2 Wilson, Lot 27, Concession 8, and No. 3 Coyle, both in Bayham Township, are drilling. Dave Laur of Tillsonburg has the contract.

South Turner Valley

In the South Turner Valley Field, Director Royalties' No. 1, LSD 16, Section 28-18-2w5, has a crude naphtha recovery from the Madison lime at 5,660 feet of 100 bbls. a day, with the flow steadily increasing. Farther south, Carleton Royalties' No. 1, LSD 2, same section, is making 117 bbls. a day, with the bottom lime still partly frozen. The hole bottoms at 6,125 feet.

Pacalta Oils' No. 1, LSD 7, same section, is below 5,475 feet, about 430 feet into the Lime in a porous horizon. It has considerable wet gas, and is preparing to test production. Spooner Oils' No. 5 Anaconda, LSD 1, same section, is below 5,200 feet, approximately 690 feet in the lime.

Publix Oil & Gas Co.'s No. 1, LSD 8, Section 28-18-2w5, is reported resuming from about 4,900 feet, with considerable light crude in the hole. The oil is from the upper sands, but at this depth the well is thought to be close to the Madison. Renfrew Royalties' No. 1 Morris & Goodfellow, LSD 3, same section, is resuming after running 10-inch casing to 4,500 feet. Some delay was caused by freezing of the water lines. British Dominion Oil & Development Corp.'s No. 4, LSD 6, is standing at 4,350 feet.

On the east side of the structure, Merland Oil Co.'s No. 2, LSD 13, Section 27-18-2w5, is preparing to resume from 2,300 feet after the holiday shutdown. Livingston Syndicate's No. 1, LSD 5, Section 34-18-2w5, is reported below 3,225 feet.

A strong wind recently demolished the derricks of McLeod Oil Co.'s No. 1, LSD 16, Section 1-20-3w5, Okalta Oils' No. 2, same section; and Commonwealth Petroleums' No. 1, Section 9-19-2w5. In the McLeod well the piping was also damaged. All three wells were acquired by Royalite Oil Co. last year, and at the time were off production.

Alberta Royalty Increase

The increase in the royalty rate on oil lands leased from the Alberta government from 5 to 10 per cent became effective on January 1. Since the increase was foreshadowed a few months ago, strong representations have been made to the provincial government by the Oil and Gas Association of Alberta, the Oil and Gas Shareholders' Protective Association, the Calgary Board of Trade and individual companies and operators, in opposition to the increase. The decision to enforce the higher royalty rate was announced by Hugh Allen, minister of lands and mines, in a letter to Herbert Greenfield, president of the Oil and Gas Association of Alberta. The minister stated that private leasing corporations, many of them controlled outside the province, exacted a higher royalty rate than the new rate imposed by the provincial government. Further representations will probably be made by the oil interests.

Highwood-Sinclair Test

On the Highwood-Sinclair structure, south of Turner Valley, Canadian Royalties' No. 1 Banner, LSD 6, Section 34-17-3w5, got the McDougall-Segur sands at 715 feet, with a small show of gas, and is deepening. The McDougall-Segur sand, which in the Turner Valley Field is usually encountered around 2,500 feet, has been a source of light crude, a number of the Central Turner Valley wells yielding commercial production in this horizon. Getting the McDougall-Segur at this depth indicates that the Madison lime may be encountered at around 2,000 feet, where the South Turner Valley it is usually between 5,000 and 6,000 feet. The test was started originally in 1914 at the time of the first Calgary boom by Banner Oils, Ltd., and got an oil seepage at 227 feet. Recently it was taken over by Canadian Royalties, Ltd., of Calgary, which resumed from around 596 feet.

Border Fields

In the border area of southern Alberta, the only test now active is Franco Oils' No. 1, LSD 6, Section 5-3-25w4, on the Cardston structure. It is below 1,200 feet and nearing a potential gas horizon.

The next few months will see a number of tests under way in this area. The farthest east is Comrey Oil Co.'s No. 1 Section 9-1-5w4, on the Comrey structure southeast of Medicine Hat. It was spudded last fall and has been standing at 180 feet. Location is on acreage of Imperial Oil, Ltd., though the test is being financed by D. A. McDonald and associates of Vancouver, B. C.

Further west, Devenish Petroleums' No. 5, LSD 4, Section 27-5-14w4, in the Skiff Field, has been standing at 630 feet and will be completed early in the new year. Two earlier tests by the Devenish interests of Calgary in the same section showed fair quantities of heavy crude at around 3,000 feet, and the company is planning systematic development to gradually extend the proven area. The project includes the ultimate establishment in the field of a refining plant specially equipped to handle this type of crude.

Still further west, on the Del Bonita structure near Milk River, Terminal Oil Co. of Los Angeles has its No. 1 started on acreage of the Nordon Corp. in NE Section 18-1-21w4. It will resume from 318 feet, with the Ellis-Madison contact as the main objective. A joint test started two years ago by Nordon Corp. and C. A. Roney on the adjacent Twin River structure, in LSD 11, Section 2-2-20w4, gave a fair showing of light crude in this horizon at 3,930 feet. On the Del Bonita structure, Sunshine Oils' No. 1 has been spotted in LSD 10, Section 19-1-21w4, north of Terminal's No. 1.

Grouse Creek Project

On the Grouse Creek structure, about 60 miles northwest of Calgary, a wildcat test will be started shortly by a Calgary syndicate. The area has been under geological investigation for some time and extensive acreage has been leased.

C. C. SNOWDON DIES

CALGARY, Alberta, Jan. 12.—C. C. Snowdon, prominent in the Alberta oil industry, died on January 6, aged 53. A native of Montreal, he came to Alberta in 1908.

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Eunice Pool Limits Gradually Being Developed; Iles Dome Well Completed for 2,160 Barrels

By TOLBERT R. INGRAM
Staff Correspondent, Rocky Mountain Area

DENVER, Colo., Jan. 14.—New allocation schedules for all New Mexico pools provide for 52,250 bbls. daily during the first half of January. Pipe line runs from Lea County pools aggregated 1,335,175 bbls. in December. Phillips Petroleum Co.'s No. 10 Woolworth, in the Cooper Pool, made 60 bbls. natural the first hour. One location was abandoned and two new locations were staked in the Cooper area. Limits of the Eunice Pool are gradually being developed by drilling, two wells on the south and one on the west showing water. Skelly Oil Co.'s No. 1-B State, which extends the pool one location east, flowed 624 bbls. in 24 hours through the tubing. Gypsy Oil Co.'s No. 1 North Grimes, in the Hobbs Pool, made 1,070 bbls. in 24 hours on a company test before acidizing. One location on northwest edge of Hobbs Pool was abandoned without drilling. Several wildcats in the Lea area are showing water. Ute Pasture gas wells in northern San Juan County are reported showing oil. Hogback is to have a deep test.

Stanolind Oil & Gas Co completed a 2,160-bbl. well on the Iles Dome in Colorado. Oil rose 135 feet in two hours in an Archuleta County wildcat.

Argo Oil Co.'s test on the O'Brien Springs structure in Carbon County, Wyoming, showed water in the Dakota. California Exploration Co.'s wildcat on the Waugh Dome in Hot Springs County, which opens a new pool, pumped 538 bbls. first 24 hours.

One completion was reported in the Cut Bank Field in Montana, making 57 bbls. first day. One well was abandoned in the Whitlash district in Liberty County when water was found in the Madison and one well was abandoned in Petroleum County.

Uintah Gas Co. had a failure in its No. 5, Ashley Valley district, in Utah.

NEW MEXICO

New allocation schedules for the state of New Mexico were issued by Umpire C. G. Staley for the first half of January following a meeting of the state allocation committee, of which C. J. Dexter is chairman. The total allocation for the state is 52,250 bbls. daily, of which 51,750 bbls. is the federal allocation and 500 bbls. made by the committee to absorb shortage caused by marginal wells.

The distribution of the allowable among pools outside of Lea County is 3,445 bbls. daily, as follows:

	Bbls.
Artesia	2,400
Hogback	200
Rattlesnake	750
Table Mesa	50
Atsec-Bloomfield	15
Total	3,445

Of the remaining 48,805 bbls. daily allotted to the Lea County Pools, 1,724 bbls. is assigned to 29 40-acre units designated as marginal units which are permitted to produce at capacity. The distribution of the marginal units by pools and allocation is as follows:

Field—	Units	Alloc.
Cooper	4	98
Eunice	2	210
Hobbs	1	7
Jal	17	1,180
Lea	3	210
North Lea	1	19
Total	29	1,724

After deducting the allocation of 1,724 bbls. daily for the marginal Lea County wells, there remained 47,081 bbls. for distribution among the nonmarginal wells of which there are 283, of which 201 are in Hobbs, 23 in Cooper, 34 in Eunice, 17 in Jal, and 8 in Lea. All these take a top allowance of 166 bbls. daily except Hobbs, where proration is on a different basis. The daily allowable for all Lea County pools, including the marginal wells, is as follows:

Field—	Units	Alloc.
Cooper	27	3,916
Eunice	36	5,854
Jal	34	4,002
Lea	11	1,538
North Lea	1	19
Hobbs	202	33,476
Total	311	48,805

Pipe line runs from Lea County pools in December were as follows:

	Bbls.
Hobbs	958,191
North Lea	598
Lea	43,082
Eunice	135,199
Cooper-Lynn	93,419
Jal	104,686
Total	1,335,175

The Texas Co., which has been a purchaser of crude in the Hobbs Pool since it constructed a pipe line into the field several years ago, did not participate in the nominations for the first half of January for the first time. In the last half of December it agreed to take 1,448 bbls. daily. This was due to the making of connections with new wells in the other pools which gives it all the oil it can handle. It now has connections with all the wells in the Eunice Pool, 16 in Jal, all in Lea, and 22 in Cooper, including its own wells. Nominations for Hobbs crude for the first half of January are: Shell, 22,063 bbls.; Humble, 6,829; Atlantic, 4,510, and Walker Oil Corp., 74.

Cooper Area

One completion was reported in the Cooper area in Phillips Petroleum Co.'s No. 10 Woolworth, C NE NW Section 26-24-36, which flowed 60 bbls. the first hour and 45 bbls. the second hour through the 2½-inch tubing at 3,490 feet for the first test and 3,480 feet for the second test. Total depth is 3,494 feet.

One location was abandoned in Gypsy Oil Co.'s No. 2 Cooper, C NW SE Section 23-24-36, a south offset to its No. 1 Cooper, an edge well.

Two new locations were released in the Texas Co.'s No. 4 Ogg, C NW NW Section 35-24-36, and its No. 5 Ogg, C NW SE Section 35-24-36.

The Texas Co.'s No. 2 Ogg, C NW NE Section 35-24-36, is drilling at 2,850 feet in anhydrite, and its No. 3 Ogg, C SW NW Section 35-24-36, is preparing to deepen after cementing the 9⅝-inch at 1,643 feet, in salt. Stanolind Oil & Gas Co.'s No. 4-A Meyers, C NE SW Section 22-24-36, is drilling at 2,150 feet in salt, and its No. 5-A Meyers, C NW NE Section 22-24-36, is drilling at 2,095 feet in salt. The Simms Oil Co.'s No. 1 Woolworth, C SE NE Section 35-24-36, which was threatened with a gas blowout at 2,800 feet, in brown lime, is shut down at that depth.

Humble Oil & Refining Co.'s No. 3 Cooper, C SW SE Section 14-24-36, at the extreme northeastern end of the development, showed no improvement when deepened from 3,697 feet, where it had sulphur water, to 3,907 feet. It will drill deeper. A drill stem test at 3,709-88 feet yielded 51 joints of water and no oil or gas. Another test at 3,788-3,907 feet showed 38 joints of salt water. Same company's No. 1 Coats, C NW NE Section 10-24-36, is shut down at 3,355 feet, having made no new hole since the fire three months ago. Continental Oil Co.'s No. 14-A Vaughn-1, C SW SW Section 14-24-36, is rigging up rotary, and its No. 15-Vaughn-1, C SE SE Section 15-24-36, is rigged and ready to spud.

Eunice Area

Two wells in the southern end of the Eunice Pool, both of which are offsets on the east to producers, do not look encouraging and apparently are close to the margin in that direction. Peerless Oil & Gas Co.'s No. 1 State, C NW SW Section 29-21-36, which had a show of oil at 3,951 feet, set the 7-inch at 3,850 feet and drilled to 3,962 feet, in lime. Swabbing indicated it would make about 400 bbls. of fluid a day, of which 35 per cent was oil. Atlantic Oil Co.'s No. 1-F State, a south offset to the Peerless well, C SW SW Section 29-21-36, failed to improve upon being deepened from 3,946 feet to 3,977 feet. Before deepening it swabbed 150 bbls. in five hours. It was then deepened and treated with 5,000 gallons of acid and swabbed water. It is preparing to plug back.

Shell Petroleum Corp.'s No. 1 State-Endura, C SE NE Section 12-21-35, 1½ miles to the west of the nearest producer, which had a show of oil at 3,875-3,909 feet in a drill stem test, set the 7⅝-inch at 3,800 feet with 600 sacks, and after drilling out plug it swabbed dry. It is shut down for orders.

Gypsy Oil Co.'s No. 2 Bell-State, C SE SE Section 8-21-36, is preparing to test at 3,916 feet, total depth. The Shell Petroleum Corp.'s No. 1-B State, C NW NW Section 29-21-36, set the 12½-inch at 275 feet with 400 sacks and is drilling in red beds at 450 feet. Tide Water Oil Co.'s No. 3 State-Foster, C NW NE Section 8-21-36, is drilling at 1,680 feet in salt.

Continental Oil Co.'s No. 30-A Lockhart-1, C SE NE Section 30-21-36, is drilling at 3,660 feet in lime, and its No. 18-A Meyers-1, C NE NE Section 18-21-36, is rigging up rotary. The same company's No. 8-A Meyers-3, C SW SW Section 8-21-36, cemented the 7⅝-inch at 1,596 feet in anhydrite with 300 sacks and is waiting. Skelly Oil Co.'s No. 1-C State, C NE NW Section 29-21-36, is drilling at 3,060 feet in lime.

Skelly Oil Co.'s No. 1-B State, C NW NW Section 16-21-36, which will mark an extension one location to the east, is a near completion at 3,903 feet. It flowed at the rate of 624 bbls. a day through the 2½-inch tubing on a short test and then shut down for orders. Atlantic Oil Co.'s No. 1-C State, C SW SE Section 5-21-36, spudded January 2 with machine and shut down for rotary. The Amerada Petroleum Corp.'s No. 1-D State, C NW NW Section 1-20-36, set the 9⅝-inch on bottom at 2,314 feet with 450 sacks and is waiting. It found the base of the salt at around 2,255 feet.

Hobbs Area

Gypsy Oil Co. has a near completion in its No. 1 North Grimes, SW cor. Section 21-18-38, an outside well and an east offset to the Humble's No. 3-B Grimes. On a company test it flowed at the rate of 1,056 bbls. of oil and 4,000,000 feet of gas a day through the 3-inch tubing and 1,070 bbls. and 5,000,000 feet of gas open flow. It will acidize.

Shell Petroleum Corp.'s No. 2-D State, SE NE NW Section 24-18-37, for which location was released early in December, is an abandoned location. It is on the northwestern edge two locations north of the most westerly producer in the field. The National Securities Oil Co.'s No. 1 Linam, NE SE SW Section 33-18-37, is cleaning out 18 feet off old bottom at 4,272 feet. Continental Oil Co.'s No. 2 Grimes, SE SE Section 28-18-38, is drilling at 3,726 feet in lime, and the Shell Petroleum Corp.'s No. 2 Sanger, SW SE SW Section 27-18-38, is drilling at 3,074 feet in sand and anhydrite. J. P. Cusack and others' No. 1 Moon, SW cor. NE Section 28-18-38, is drilling at 1,465 feet in red beds. Amerada Petroleum Corp. and Skelly Oil Co.'s No. 1-E State, NE SW NW Section 24-18-37, is running the 9⅝-inch at 2,821 feet, total depth.

San Simon Area

Humble Oil & Refining Co.'s No. 1 Saunders, C NE NE Section 4-22-34, is rigging up cable tools.

Maljamar Area

Maljamar Oil & Gas Co.'s No. 4 Baish, NE SE NE Section 21-17-32, is shut down at 3,568 feet in sandy lime.

Caprock Area

Vierson & Brown's No. 1 Robinson, C NW SE Section 14-11-32, has derrick completed.

Jal Area

There were no completions or new locations in Jal. Continental Oil Co.'s No. 12-A Wells-2, C NW NE Section 12-25-36, which has been plugging back from 3,518 feet, total depth, plugged back from 3,496 to 3,490 feet and is testing. It is having trouble unloading the hole. The same company's No. 13-A Sholes-2X, NW cor. SE Section 13-25-36, is drilling at 3,000 feet in lime. Southern Petroleum Exploration Co.'s No. 2-A Ascarate, C SE NW Section 24-25-36, cemented the 9⅝-inch on bottom at 1,424 feet, in anhydrite, with 600 sacks, and is waiting. Repollo Oil Co.'s No. 2 Hanagan, NE cor. SW Section 12-25-36, is shut down at 3,078 feet in lime.

Lea Area

The Texas Co.'s No. 1 Swearingin, C NE SW Section 8-20-34, is shut down for orders at 3,399 feet, and its No. 1 Moore, C NW SE Section 21-20-32, set the 13⅜-inch at 497 feet and is drilling ahead at 510 feet in red beds. Same company's No. 4-A Lynch, C SE NE Section 34-20-34, is shut down for orders at 3,758 feet. At this depth it was estimated good for 10 bbls. of oil and 5 bbls. of water a day. The Ryan Consolidated Petroleum Corp.'s No. 1 Acree, C NE NW Section 35-20-32, is rigging up cable tools. The Texas Co.'s No. 1 Elliott, C NE NE Section 22-20-34, is drilling at 3,770 feet in lime with 1,500 feet of sulphur water in the hole.

Eddy County

Neil Wills and others' No. 1 Montgomery, SW NE Section 10-23-30, Salt Lake district, is shut down at 2,400 feet.

San Miguel County

The Cabra Springs Oil & Gas Co.'s No. 1 West Pino Mesa, CWL Section 19-12-22, is shut down in sand at 1,300 feet with hole full of water.

Santa Fe County

Elmer Fisher's No. 1 Hill, Section 6-10n-7e, Barton district, is drilling at 2,510 feet in hard brown lime. It had a show of oil at 2,490 feet.

Roosevelt County

The Claudell Development Co.'s No. 1 Wilmes, C SW SE Section 21-2s-30, Pomeroy district, is drilling below 3,126 feet in hard lime, topped at 3,114 feet. It had

shows of wet gas at 2,960-70 and 2,990 feet.

Union County

Sierra Grande Oil Corp.'s No. 1 Rogers, Section 4-29-29, Sierra Grande arch, is drilling below 350 feet.

Northwest Area

Considerable drilling activity in northwestern New Mexico, particularly in San Juan and McKinley Counties, is in prospect for the coming summer. Outside of some shallow wells drilled on the Rattlesnake Dome by the Continental Oil Co., and prospecting in the Aztec district, very little work was done the past year. It is reported, but not confirmed, that Stanolind Oil & Gas Co. has several projects in prospect. These included the deepening of one of the gas wells in Ute Pasture, the drilling of a deep test at Hogback, and the producing of several wells on the Hospah Dome.

In 1921 the Midwest Refining Co. (now the Stanolind Oil & Gas Co.) drilled two gas wells in SW Section 36-32-14, Ute structure, in northern San Juan County. One of these was rated at 12,000,000 feet a day in the Dakota at 2,480 feet, and the other at 37,000,000 feet at 2,360 feet. Producers & Refiners Corp. also drilled one well which gauged 72,000,000 feet a day in the NW Section 1-31-14 at 2,380 feet. These are on Indian leases. The wells were capped for lack of a market, but about two years ago a deal was made to sell gas to the Southern Union Gas Co. for its line to Albuquerque and a connection with this line was built. Gas also is piped to Durango, to which place a line was laid in 1930. About a year ago it was reported that these wells were making some oil, but confirmation was lacking. This report is now revived with the additional information that the wells are making from 1,000 to 1,500 gallons of oil a day each through traps and that as a result there has been a decrease in the pressure. It may be necessary to build a booster station unless the pressure is restored. It is reported that the Stanolind company will go back into No. 2 and deepen it around 400 feet to ascertain the source of the oil. If oil is not found in commercial quantities, the hole will be plugged back to the gas sand.

The Hogback Dome is located in Sections 18 and 19-29-16w, and the Midwest Refining Co. brought in the discovery well in 1922 at 796 feet, flowing 375 bbls. initial of high gravity oil from the Dakota. Subsequently 11 additional wells were drilled on the structure, but for several years there has been no additional development. About five years later the Continental Oil Co. drilled a deep test on the Rattlesnake Dome, farther west, and found production in the Pennsylvanian. Later a second deep test was drilled. It has been looked upon as a good shot for a deep test on Hogback and Stanolind was said to have planned to drill when the oversupply of crude held up the plans. It is now stated that the company will go ahead this year.

Another angle to the development is that Stanolind is preparing to go back into the Hospah Field in McKinley County and recondition the wells and market the oil. It drilled the discovery well in 1927 in its No. 1 Hancock, SE NW Section 1-17-9w, and found water in the Dakota at 3,282 feet. It plugged back to 1,561 feet and saved the oil in a sand in the Mesa Verde, the well making 140 bbls. the first 12 hours and 240 bbls. the first 24 hours. Subsequently it drilled several other wells and is said to have a settled production of around 300 bbls. a day with several thousand barrels in storage. When the company was letting go of some of its Rocky Mountain properties two or three years ago, a deal was on to turn the Hospah operation over to Los Angeles parties, who planned to build a pipe line to a rail connection on the south. This deal fell through and now it is understood that the Government is calling upon the company to market the oil.

In this same connection it is stated that if the new operations warrant it, plans for building a pipe line northward to meet a similar line from the Iles Dome in Moffat County, Colorado, will be considered. This provides for the junction of the two lines where the high and low gravity oils will be mixed and either piped or shipped by rail to Utah Oil Refining Co. at Salt Lake City.

McKinley County

Royer Oil Co.'s No. 1 Santa Fe Railroad, NW cor. SW Section 13-15-10w, Walker Dome, an offset to the Midwest discovery well, is shut down at around 1,000 feet with oil in the hole, to straighten up titles and acquire additional acreage.

COLORADO

Moffat County

Another large well was completed on the Iles Dome in the Stanolind Oil & Gas Co.'s No. 22-SD Shaw, NW SE NW Section 27-4n-92, making five completed by the company in the past year with an aggregate initial production of better than 15,000 bbls. in 24 hours. The last well was completed at 3,423 feet, 29 feet in the Sundance, and flowed an average of 90 bbls. an hour, or 2,160 bbls. a day. It is near the top of the structure. Materials are being moved in for its No. 35-SD Parkinson, SE cor. NE Section 22-4n-92. The field is now running around 1,700 bbls. daily, far below its developed capacity. Stanolind and the Texas Co. own all the producing wells. It is understood that the Stanolind company is building up production to supply the Utah Oil Refining Co.'s refinery at Salt Lake City when the last named company's contract for crude in Texas expires and that Iles' outlet in the spring probably will be increased to at least 5,000 bbls. daily.

Archuleta County

Oil City Petroleum Co.'s No. 1-A Garnett, Lot 3, SW Section 25-33-2e, Price district, which is showing for a producer at 970 feet, total depth, will be drilled into the sand (the Muddy) on January 15 according to present plans. The hole was cleaned to bottom and oil rose 235 feet in less than two hours. The 6¼-inch casing has been run to the top of the sand, which was barely scratched, and erection of tanks is in progress. There is considerable gas with the oil, but not enough to flow the well at present depth.

Huerfano County

S. W. Pressey's No. 1 Ojo, SW NE Section 10-29-69, Oakview district, is shut down at 2,550 feet, corrected depth.

Lincoln County

Consolidated Smelting & Metals Co.'s No. 1 Hancock, NW cor. SE Section 7-17-52, Haswell district, is drilling below 250 feet.

Park County

South Park Oil Co.'s No. 1 State, SE cor. SW Section 16-11-75, Haswell district, is shut down at 775 feet to run the 10-inch.

Prowers County

The Trojan Oil & Gas Co.'s No. 1 Lotus Oil, NW NE NE Section 15-23-46, Lamar district, is drilling at 4,575 feet in carboniferous shale and has been in that formation for several hundred feet.

WYOMING

Big Horn County

Ohio Oil Co.'s No. 1 Hoskins, SW cor. Section 14-56-97, Byron Dome, is drilling at 5,375 feet and will be an early completion. Crosby & Huntington's No. 1 Denio, Tract 43-C, Section 15-55-97, which has been shut down for the past two months, is resuming at 1,200 feet. Wyoming Oil & Refining Co.'s No. 1 Evans, NE cor. NW Section 12-49-91, has rig completed. J. W. Bales' No. 1 Parker, C SW SW Section 23-49-89, Ziesman Dome, is straightreaming the 12½-inch to bottom at 125 feet. Yale Oil Corp.'s No. 1 Blakesley, NE NW Section 28-49-91, Bonanza district, set the 12½-inch at 85 feet and is drilling at 150 feet.

Carbon County

Argo Oil Co.'s No. 1 Johnson-Union Pacific, NE cor. SE Section 5-24-87, O'Brien Springs, which gave considerable promise of opening a new oil pool in the Dakota when cores showed saturation, proved a disappointment when pipe was set and the sand drilled into with cable tools. Water rose 2,500 feet from the Dakota at 3,059-72 feet. It was then drilled 50 feet deeper to the Lakota and encountered more water. It will be carried down to the Sundance

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TWIN DISC CLUTCHES

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and if that horizon shows nothing commercial, it will plug back to the Muddy at 2,940-50 feet and test show of oil.

An edge test in the Rock Creek Field, Mike Lundy's No. 1 Government, NE SW Section 34-20-78, which was drilled to the Dakota at 4,248 feet in 1928, is resuming to go 500 feet to the Sundance. The 6⅝-inch is being swedged at 4,105 feet. The Dakota showed some oil, but it was not commercial.

Earl W. Reeder, Inc.'s No. 1 Union Pacific, C SW SW Section 19-20-83, Overland Dome, is shut down at 5,931 feet, 2 feet in sand, probably the Dakota. It is believed water showing at this depth is coming from upper horizons. It is fishing for parted string of 4¾-inch pipe. Same company's No. 1 Whitford, SW SE SE Section 24-20-84, is drilling at 1,700 feet. Ohio Oil Co.'s No. 1 Morris, C NW SE Section 6-20-77, Diamond Dome, is drilling at 5,375 feet in shale and same company and California Co.'s No. 1 Kyle, NE SE NE Section 26-21-79, Medicine Bow district, is drilling at 2,578 feet in shale.

Hot Springs County

California Exploration Co.'s No. 1 Government, NE SE NE Section 12-44-97, Waugh Dome, a wildcat which opens a new black oil pool in the Big Horn Basin, pumped 538 bbls. first 24 hours. There is no gas with the oil and it is believed that a prolonged pumping test will open up the channels and result in a bigger well than shown by the first day's test. The oil rose 3,700 feet in six hours. Total depth is 3,807 feet and it topped the Embar at 3,740 feet.

Fremont County

Mid-American Oil Co.'s No. 2 Government, C NE SW Section 14-28-92, Sheep Creek, is running the 10-inch at 1,240 feet.

Converse County

E. B. Jones and others' No. 1 State, SW cor. Section 16-32-69, Shawnee district, is shut down for warmer weather after spudding to 22 feet.

Lincoln County

Senrab Oil Co.'s No. 3 Government, SE NW Section 10-26-113, La Barge district, is drilling at 1,100 feet after shutting off water coming through a split in the 6¼-inch with a packer.

Sheridan County

Beaver Creek Oil Association's No. 1-A Allison, SW SE Section 15-55-85, Beaver Creek structure, formerly carried as the Sheridan Syndicate, pulled the 8¼-inch at 2,585 feet to replace damaged shoe, reran and resumed drilling. It is making hole at 2,600 feet. A show of oil at 1,660-1,700 feet was cased off.

Niobrara County

Interstate Oil & Refining Co.'s No. 1 Morrell, NW NE SE Section 2-39-61, West Mule Creek, is drilling at 3,050 feet.

Park County

Garland Oil Co.'s No. 2 Government, SE NE NW Section 14-56-98, Garland Dome, is drilling at 1,565 feet. It topped the Frontier formation at 1,360 feet and had two shows of wet gas above that horizon.

Washakie County

Chris Oil Syndicate's No. 1 Government, C SW SW Section 31-48-90, Hidden Dome, is drilling at 1,600 feet.

Weston County

Lew Fletcher's No. 3 fee, CWL NW NW Section 5-46-63, Osage Field, is drilling at 420 feet, and Irene Eaton's No. 14 Government, NE SW Section 30-46-63, is drilling at 1,320 feet. Albert Jones' No. 8 Bock, SW cor. NE Section 21-46-63, is fishing for bit at 600 feet.

Conway Oil Corp.'s No. 1 Government, C SE NW Section 7-41-60, Dewey Dome, underreamed the 10-inch to 1,060 feet and is drilling at 1,130 feet.

MONTANA

Glacier County

One completion was reported in the Cut Bank Field, where winter weather has closed down most of the operations. Lawler & Hoer's No. 1 Clarkson, C SW SW Section 9-33-5w, was completed at 2,904 feet in the pay at 2,870-88 feet. Oil rose 2,200 feet in the hole and it swabbed 57 bbls. first five hours.

A. B. Cobb's No. 4 Walberger, SE cor. Section 35-35-6w, is cleaning out and lowering the 8¼-inch to bottom at 2,656 feet. Fist and others' No. 1 Donen, NW cor. Lot 10, Block 11, Section 12-33-6w, began spudding January 4. Indian Oil Co.'s No. 1 Reikhoff, SW SE Section 3-34-6w, which was reported a completion last week with 300 feet of oil in the hole at 2,950 feet, is shut down and has not been tested. Marshall and others' No. 1 Wilkins, NE SE NE Section 12-33-6w, is drilling at 745 feet. Montana Power Gas Co.'s No. 1 State, C SW Section 16-33-5w, which was reported a completion last week with 2,200 feet of oil in the hole at 2,935 feet, total depth, pumped 87 bbls. the first 21 hours and 41 bbls. next 24 hours. Bruce Radigan's No. 1 Connolly, NW SW NW Section 7-33-5w, is rigging up, and Watson, and others' No. 1 Miller, NW NE Section 1-33-6w, is fishing for bit at 1,450 feet. Wickstrand and Walgren's No. 1 Simero, Lot 5, Block 17, Section 12-33-6w, is drilling at 250 feet.

Toole County

In the Kevin-Sunburst Field the Monopeg Oils, Ltd.'s No. 3 Dipple, SW NW Section 28-35-1w, is shut down at 240 feet, and Pfabe & Engelking's No. 7 Seabrook, SW SE NE Section 30-35-2w, is drilling at 1,510 feet. L. P. Jackson's No. 1 Halter, E NW NE Section 21-35-2w, lost hole at 1,100 feet, skidded rig 16 feet to the south and is spudding at 75 feet in No. 1-A.

Liberty County

Western Natural Gas Co.'s No. 3 Shaffer, N SW SE Section 14-37-4e, Whitlash district, encountered water in the Madison at 2,498 feet and was plugged and abandoned. It was a north offset to its No. 2 Mahoney, which made 15 bbls. initial. John Wilde's No. 2-A Mahoney, W SE SW Section 23-37-4e, is drilling at 280 feet.

Petroleum County

Guy Smith and others' No. 3, NE SE SW Section 33-14-26, Flatwillow district, is plugging to abandon at 1,380 feet, being a failure in all three Cat Creek sands.

Fergus County

Button Butte Oil & Gas Co.'s No. 1 Woodward, SE cor. SW Section 20-14-24, Button Butte district, is drilling at 3,000 feet.

UTAH

The Ramsey Petroleum Corp.'s No. 1 Senior, SW NE SW Section 18-26-7e, Last Chance structure, Emery County, which opens a new gas field and reveals possibilities for oil in additional development, is plugging back from 3,165 feet, in the Coconino sandstone, to 2,800 feet to produce gas horizon between 2,724-2,800 feet. Several other gas horizons were encountered in this test, but this was the largest. The others were cased off. It gauged 21,000,000 feet a day at 2,724-55 feet and it is estimated that the horizon which will be produced will make around 30,000,000 feet a day. There was a show of oil at 3,071 feet. Another well probably will be drilled for oil in the spring.

Uintah Gas Co.'s No. 5, NW cor. SW Section 23-5s-22, Ashley Valley, Uintah County, failed to encounter commercial gas in the Morrison at 1,730 feet, total depth, and was plugged and abandoned.

The Arrowhead Petroleum Co.'s No. 2 Escalante, NW cor. NE Section 19-43-15, Bloomington district, is drilling at 4,230 feet after cleaning up fishing job at 4,105 feet, and its No. 1-A, SE SW NE Section 1-43-15, Punchbowl district, is cementing to drill by bit at 875 feet, total depth. Jerome L. Andrus, trustee's No. 1, C SE NW Section 6-41-11w, Virgin Field, is drilling at 1,100 feet.

WASHINGTON

People's Gas & Oil Co.'s No. 1 Donnie Boy, Section 19-17-28, Frenchman Hills, Grant County, is reaming the 22-inch to bottom at 310 feet.

NORTH DAKOTA

Mott Oil & Gas Co.'s No. 1, E NE NE Section 27-134-92, Mott district, Rettinger County, is drilling at 2,100 feet.

Central West Fields

(Continued from Page 57)

J. T. Smith farm produced 50 bbls. initial. J. C. Miller and others' No. 3 Ed Smith farm was a 20-bbl. producer. Mark Bell & Co.'s No. 1 Alex Whitehouse farm was dry. Same parties' No. 2 John Newton farm, same county, was a gas well in the Jackson sand. Friendship Oil Co.'s No. 2 E. C. Royal farm, was dry at 505 feet. W. E. Hupp and others' No. 1 Estill Board farm, also in Ohio County, was reported a dry hole.

Total runs made from wells served by the Illinois Pipe Line Co. in western Kentucky during December, 1934, were 127,986.49 bbls.

ILLINOIS

In the Illinois Field, Salvage Oil Co. is drilling on the John Patton farm, Section 2, LaMotte Township, Crawford County, and Karns and others are drilling on the Orlando Walker farm, Section 24, same township. G. R. Pauley is drilling No. 1 Guy Comley farm, Section 12, Oblong Township, same county.

Tilford & Morrow are drilling No. 2 W. B. Johnson farm, Section 36, Casey Township, Clark County. In Parker Township, C. Hartman and others are drilling on the J. T. Baughman farm, SW Section 20, and F. E. Stohr and others are drilling No. 13 on the James Turner farm, in Section 33, same township.

Price & Weeger are drilling No. 1 C. A. Taylor farm, Section 2, Honey Creek Township, Crawford County. Price & Weger are drilling No. 1 H. Standfield farm, Section 36, Prairie Township. Frank Ellison is drilling No. 1 E. R. McClain farm, Section 2, same township.

In Madison County, T. C. Havelka is drilling on the T. C. Havelka farm, Section 24, Fort Russell Township. In Marion County, John Winbush is drilling on his own farm, Section 8, Iuka Township.

★ ★

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TECHNICAL QUESTIONS ANSWERED

By Charles K. Francis, Ph. D., Technical Editor

This department of The Oil and Gas Journal is devoted to the manufacturing branches of the oil industry.

Those connected with the refining of crude petroleum, the manufacture of natural gasoline and closely allied industries are invited to submit their problems to Dr. C. K. Francis, technical editor. The department was created for the purpose of aiding managers, superintendents, engineers, chemists and all those engaged in the various phases of plant operation; also those connected with

marketing and utilization of petroleum products.

Questions should be submitted in as much detail as possible.

Inquiries must be signed but only the given initials will be printed. The source of the question is considered to be confidential.

Questions requiring a discussion of patents, the use of intricate formulas, extended computations, or cost estimates cannot be considered.

When the matter is of general interest the reply will be published within a reasonable time.

Possible Utilization of Natural Gas as Motor Fuel

It is reported that immense volumes of natural gas are being lost at the wells; also that additional gaseous hydrocarbons are made in the extraction of gasoline from natural gas, and when making gasoline at the refineries, for which there is no market. Would it not be possible to compress such gases and then use them as motor fuel?—H. C.

Many investigations have been made for the purpose of demonstrating the adaptability of natural gas and other hydrocarbon gases for motor fuel. The most serious of these have been conducted in Europe, especially in England and France, where the selling price for gasoline is much higher than in the United States. The fuel systems of automobiles have been suitably modified and gases have been used in numerous runs.

The very important fact to consider, aside from price, is that gasoline is a liquid ensily and cheaply transported and especially well adapted for motor fuel. Gas is not so concentrated, many more cubic feet being required than the gasoline equivalent. A report by C. M. Walter before the World Petroleum Congress, London, July 19-25, 1933, gives a representative idea of the present condition. The material following is from this report:

"Since December, 1931, very complete investigations have been made in connection with the use of bottles for the storage of gas on vehicles, and further, a good deal of experimental work has been done on the running of engines on gas in place of petrol, with a view to determining to what extent the designs might have to be modified to obtain the most efficient results.

"The investigations carried out in the Industrial Research Laboratories of the city of Birmingham's gas department, culminated in two vehicles being placed on the road, operating on gas. One is a 20-horsepower delivery van, which has now been operating since October entirely on gas as a fuel, giving extremely satisfactory results. The other is the 32-seater bus which has been running on ordinary service work in Birmingham since February last.

"The results of tests carried out with these two vehicles seem to show quite definitely that 265 cubic feet of 475 B.t.u. gas give the same performance as 1 gallon of petrol, provided that certain alterations to the engines, such as increasing the compression ratios and modifying the ignition gear, are made.

"In the case of the 20-horse van, five light-weight cylinders, each containing 354 cubic feet of gas at 3,000 pounds per square inch, enable the vehicle to operate over a distance of 85 to 100 miles per charge, whilst in the case of the passenger bus, which is fitted with seven similar cylinders, the gas consumption per mile varies from 50 to 70 cubic feet.

"Whilst it is recognized that this might be a disadvantage, in so far that passenger vehicles running upwards of 100 miles per day might have to completely recharge or 'top-up' en route, in view of the limited range of action per charge as compared with petrol, it would appear that these difficulties are by no means insuperable, and it is anticipated that at an early date quick acting union connections will be utilized for making the connection of the vehicle to the charging station, and by the employment of storage cylinders, storing gas at pressures of upwards of 5,000 pounds per square inch, the time required for filling would be reduced to a minimum."

Requirements for Fuel Burners and Conditions for Combustion

Is there such a thing as a standard specification for oil or gas burners? Is it possible to make a mixture of natural gas and air, by means of a burner, that will remain fixed in composition?—R. Y.

So far as my records show, no standard burner for either oil or gas has been recognized. When burning a fuel in the industries there are several variables that influence the efficiency in addition to the burner. The American Gas Association, for instance, has tested a large number of gas burners, 19 being mentioned in one report and 12 types in another. The book Combustion, Third Edition, page 109, gives a list of general requirements for all burners as follows:

"Apart from efficiency of the application, the burner itself must have the following characteristics: (1) Controlability over a wide range of turndown without danger of flashback. (2) Maintenance of the desired atmospheric conditions. (3) The heat produced must be distributed satisfactorily. (4) Combustion must be complete; neither carbon nor carbon monoxide should escape from the flames. (5) The flames must not lift or be blown from the ports. (6) Ignition should take place readily; the flame should travel from port to port without difficulty. (7) The burner should ignite, burn and extinguish without undue noise or puff."

The burner alone cannot control the results to be obtained by a given fuel. The furnace, including size and shape, must be adapted to the kind of material that is being burned. Another factor of importance is the means for removing the waste gases and drawing in the required quantity of air; usually mentioned as pressure when considering firing conditions.

Combustion of a fuel requires that a gas be first produced that will unite with the oxygen of the atmosphere and in doing this will produce heat. Satisfactory and economical combustion requires that there shall be good mixture of the gas and air and that the composition of the mixture will be sustained long enough to consume the fuel. Combustible gases and air do not form stable mixtures so it is essential to good operation that the firing take place quickly, otherwise there will be a separation, largely because of the differences in specific gravity, with resulting dead spots and consequent loss of efficiency. It is one function of the burner to produce the mixture and the design of the furnace should be such that it will aid in maintaining the contact of the gases and properly distribute the heat. The burner alone cannot operate to make a permanent mixture.

References

Research in Fundamentals of Combustion Space Requirements in High Temperature Gas Furnaces. Report No. 723.

Research in the Elimination of Noise in Industrial Gas Burners. Report No. 724.

Combustion, Third Edition.

All published by the American Gas Association.

Origin and Meaning of Therm for Measuring Gas Deliveries

Can you tell me where the therm originated and just what it means? I have had several different meanings given to me and want to know the official one, if there is one.—S. T. C.

It appears that the therm originated in England about 1920, the meaning of the word being a volume of gas equivalent to 100,000 British thermal units. The reason for this unit is to give an expression of the heating value, which, of course, is the most important feature, in place of the common unit of measure, 1,000 cubic feet. A thousand cubic feet of one gas may be equivalent to twice as much of another gas when measured by the volume, cubic feet, system if required to be measured by the therm system. This is explained by reference to 1,000 cubic feet of natural gas, which usually has a heating value of 1,000 B.t.u. per cubic foot, as containing 10 therms, or 1,000,000 B.t.u.; compared with an equal volume, 1,000 cubic feet, of an artificial gas testing 500 B.t.u. per foot. In the latter gas there would be only 500,000 B.t.u. or 5 therms per 1,000 cubic feet.

It is claimed that the therm as a unit of measurement is easier to use when accounting for gas delivered to domestic consumers. It appears to be well suited for districts where artificial gas is distributed, especially when several varieties of gas are used. The normal natural gas does not vary much in heating value from 1,000 B.t.u. per cubic foot, although wells are known that have produced noncombustible gas.

Separating Mineral Oil and Vegetable Oil Mixtures

What is the common method for distinguishing the percentage of each oil in mineral oil (white oil), and vegetable oil mixtures?—C. A. B.

There are several characteristics that may be relied upon for the purpose of the identification of the different oils contained in a mixture. Each of the fixed oils, no matter what may be the origin, has certain properties because of its chemical structure by which it may be identified. Mixtures of some vegetable oils may be difficult to separate and identify because they are of similar composition but a mixture of containing mineral oil and a vegetable oil is quite easy to analyze. The important distinguishing property is based on the fact that vegetable oils will form ordinary soaps whereas the petroleum oils do not.

Through the process of saponification the vegetable oils and the animal fats produce soap. The essential reaction is that an alkaline substance unites with the oil or fat to form soap. Therefore, a mixture of a vegetable oil and a mineral oil may be separated by means of saponification. The vegetable oil being converted to soap and the mineral oil obtained in the free state.

The details of the process may be found in the textbooks on organic chemistry. The mixture is treated with an alcoholic alkaline solution and thoroughly washed with water in a separatory funnel, the soap solution and excess water being removed after settling. Next the liquid is shaken with petroleum naphtha or natural gasoline. Two layers are produced on settling, the lower watersoap and the top the naphtha solution of the mineral oil. The water solution is drawn off and then the naphtha removed by distillation, leaving the residue of mineral oil.

Definition for Fuel Oil With Four Recognized Grades

When arranging a classification of petroleum products, what oils can properly be called fuel oils?—H. M. B.

In a general way, any oil that is burned to furnish heat may be called fuel oil but the practice in the industry is to supply oils of certain specified properties to meet the requirements of the consumer. A definite flashpoint must be met to comply with city and state laws; this may vary between 100° and 150° F.

The American Society for Testing Materials, Committee D-2 on Petroleum Products, has prepared a tentative definition, approved by the American Standards Association, for fuel oil as follows:

"Any liquid or liquefiable petroleum product burned for the generation of heat in an industrial or household furnace or firebox, or for the generation of power in a Diesel engine, exclusive of oils with a flash point below 100° F. Tag closed tester, and oils burned in cotton or wool-wick burners. Fuel oils in common use fall into one of four classes: (1) Residual fuel oils, which are topped crude petroleum or viscous residuums obtained in refinery operations; (2) distillate fuel oils, which are distillates derived directly or indirectly from crude petroleum; (3) crude petroleums and weathered crude petroleums of relatively low commercial value; and (4) blended fuels, which are mixtures of two or more of the three preceding classes."

NATURAL GAS DEVELOPMENTS

Hearing Is Postponed on Michigan Connection

MUSKEGON, Mich., Jan. 14.—Hearing on a petition of the West Michigan Consumers Co. for a 30-day extension of emergency service from the Muskegon Gas Co. distribution system from January 6 to February 5 has been postponed until Friday, January 18.

The emergency connection was established between the two natural gas lines on December 6 after several Greater Muskegon industries has been shut down for several days for lack of sufficient supply. Since establishment of the connection to provide the West Michigan company, an industrial concern, with an auxiliary supply when necessary from the Muskegon Gas Co.'s Austin Township, Mecosta County, natural gas field, the West Michigan company has contracted for the by-product gas output of the new cracking unit soon to be erected by the Naph-Sol Refining Co. West Michigan also has ordered some equipment for installation of a butane plant in connection with its compressor plant in the Muskegon oil field.

Petition to the utilities commission not only seek a 30-day extension but also extension of emergency service until about May 1, when the cracking unit is expected to be completed, and maintenance of the connecting pipe thereafter in case of any future emergencies threatening operations of Muskegon industries. About 25 major industries are now purchasing gas from the West Michigan company.

GAS FRANCHISE TAX

LOS ANGELES, Calif., Jan. 12.—Circulation of initiative petitions was begun by the newly formed municipal affairs committee to have placed on the April 2 ballot a charter amendment to increase the city's revenues by compelling public gas companies to pay for the use of the streets.

Under the amendment the city council would be empowered, but not compelled, to issue franchises to such companies for a period not to exceed 35 years, provided the city is given the right to purchase the companies' properties at any time and provided franchise taxes set up in the amendment are paid annually.

Senator Small of Amarillo Drafts Gas Legislation

AUSTIN, Tex., Jan. 14.—Enforced ratable takings of gas for light and fuel markets is urged by Senator Clint Small of Amarillo, who has drafted legislation to halt wastage in the Panhandle Field.

Legislation, Senator Small said he planned to foster this session, would proceed from that fundamental. Gasoline stripping plants and carbon black plants accused of causing much of the waste of 1,000,000,000 feet daily, would be restricted to use of casinghead gas and the residue, respectively.

Major companies, which both produce and transport, would be forced to share a market independents claim has been monopolized. Independents, asserting major companies were squeezing them out of business, several years ago obtained enactment of the "sour gas law," which permitted use of a certain portion of potential production for gasoline extraction and carbon black manufacture.

Use of sour gas would be restricted to a proportion of withdrawal of sweet gas used for light and fuel markets. Senator Small said the proportion, yet to be ascertained, would be adjusted to prevent drainage of sweet gas areas by excessive production of sour gas.

An integral part of the program would be declaration of gas pipe lines as public utilities, a step deemed necessary by Senator Small to enforce a ratable takings law. If it later appears that would not be sufficient, Senator Small said he might propose divorcement of pipe lines from producing companies.

MEDICINE HAT EXPLOSION

MEDICINE HAT, Alberta, Jan. 12.—One man was killed, 11 persons injured and two buildings demolished as a result of explosions due to gas leakage attributed to a break in a high pressure main of the municipal gas system, caused by frost contraction.

New York-Pennsylvania Gas Field Developments

COUDERSPORT, Pa., Jan. 14.—The Dean estate well of Empire Gas & Fuel Co. featured gas belt activities in the week ending January 11, being completed for 20,000,000 feet a day at a depth of 4,631 feet in Alma Township, Allegany County, New York. West of this test, in Cattaraugus County, Persia Township, Finance Oil & Gas completed its well on the John Inman farm at 3,340 feet, producing 100,000 feet from the Medina found at 3,328 feet. The larger well in Allegany County, got the Tully sand at 4,627 feet.

Other operations in New York State were mainly routine. Higgins and others were shut down at 2,600 feet on the Steadman farm, Allen Township, Allegany County. Farnman and others were down 3,211 feet on the Murray estate, Belfast Township, same county, drilling deeper after getting a flow of 150,000 feet in the Tully sand at 3,207 feet. Cunningham was drilling at 600 feet on the Maxwell farm, Willing Township, same county.

Belmont Quadrangle Development Co. cased its well on the T. H. Wing farm, Greenwood Township, Steuben County, at 4,717 feet, the Tully being at 4,704 feet. In the same county, Thurston Township, Harry Erwin was drilling at 1,600 feet on the Edward Fisk farm. A. B. Button was shut down at 810 feet on the Earl Dodson farm, Junius Township, Seneca County, while Trumbull was shut down at 900 feet on the W. B. Lasher farm, Throop Township, Cayuga County. Great Northern was rigging up on the Van Orman farm, Bristol Township, Ontario County.

Pennsylvania

Lycoming was down 5,290 feet on the R. and G. Carmer farm, Hebron Township, Potter County, drilling deeper after getting a flow of 700,000 feet in the Tully at 5,287 feet. East Penn Development Co. was drilling by tools at 4,491 feet on the Presbyterian Church property, Shippen Township, Tioga County. E. Cabot on the W. F. Burroughs farm, Gaines Township, same county, where the Tully was reached at 6,090 feet, was drilling at 6,158 feet. Lycoming got the Tully at 4,940 feet and cased at 4,950 feet, on the W. B. Hemphill farm, Hebron Township, Potter County. Potter Development Co. remained idle at No. 2 Penn-Stave location, Hebron Township, and Sylvania

(Continued on Page 78)

Natural Gas Department Meets in Memphis in May

Arrangements have been completed for holding a spring meeting of the natural gas department of the American Gas Association at the Hotel Peabody, Memphis, Tenn., May 6 to 9. The last meeting of this kind to be held by the natural gas department was in Tulsa in 1932.

The committee in charge of the program for the Memphis meeting will convene about the middle of January and select topics for discussion. These will embrace the latest developments in the production, transmission and selling of natural gas. Tentative plans favor a round table treatment of subjects, with an allotment of 20 minutes to the subject, divided into a 15-minute period for the presentation of a subject and a 5-minute discussion.

PURIFIED GAS FOR LEAMINGTON

LEAMINGTON, Ontario, Jan. 12.—By a vote of 679 to 39, electors of Leamington approved an agreement by which purified gas will be supplied the town by the Southern Ontario Gas Co. For some years unpurified gas has been delivered by the Southern Ontario Gas Co.

Under the tentative agreement reached last fall and now approved, Southern Ontario Gas Co. will start in the spring to lay a new main from its purification plant at Glenwood in the Tilbury Field to Leamington, at an estimated cost of $68,000. Delivery of purified gas will be commenced in the summer. Until purified gas is delivered, the town will pay 36 cents per 1,000 feet for the raw gas. The rate for purified gas will be 41 cents per 1,000 feet, though the rate to consumers will remain unchanged at 55 cents net.

DOMESTIC AND COMMERCIAL CONSUMPTION OF NATURAL GAS IN THE UNITED STATES IN 1932, BY STATES*

State—	Domestic				Commercial				Total			
			Value at points of consumption				Value at points of consumption				Value at points of consumptic	
	Consumers	M cu. ft.	Total	Average (cents)	Consumers	M cu. ft.	Total	Average (cents)	Consumers	M cu. ft.	Total	Average (cents)
Alabama	21,120	748,000	$1,023,000	136.8	310	137,000	$63,000	46.0	21,420	885,000	$1,086,000	122.7
Arizona	(†)	(†)	(†)	(†)	(†)	(†)	(†)	(†)	(†)	(†)	(†)	(†)
Arkansas	55,830	4,874,000	2,678,000	54 9	8,200	2,089,000	881,000	42.2	64,030	6,963,000	3,559,000	51 1
California	1,276,150	50,127,000	47,070,000	93.9	74,450	10,799,000	6,605,000	61.2	1,350,600	60,926,000	53,675,000	88.1
Colorado	87,210	4,154,000	3,552,000	85.5	7,970	1,229,000	769,000	62.6	95,180	5,383,000	4,321,000	80.3
District of Columbia	(‡)	(‡)	(‡)	(‡)	(‡)	(‡)	(‡)	(‡)	(‡)	(‡)	(‡)	(‡)
Florida	2,930	68,000	116,000	170.6	10	3,000	1,000	33.3	2,940	71,000	117,000	164.8
Georgia	56,010	1,692,000	2,238,000	132.3	2,690	803,000	365,000	45.5	58,700	2,495,000	2,603,000	104 3
Illinois	975,700	13,417,000	23,013,000	171.5	56,570	2,696,000	4,017,000	149.0	1,030,270	16,113,000	27,030,000	167.8
Indiana	60,250	1,321,000	1,457,000	110.3	2,650	202,000	171,000	84.7	62,900	1,523,000	1,628,000	106 9
Iowa	52,730	1,033,000	1,093,000	105.8	4,200	295,000	208,000	70.5	56,930	1,328,000	1,301,000	98.0
Kansas	173,160	13,191,000	8,665,000	65.7	18,930	7,084,000	2,569,000	36 3	192,090	20,275,000	11,234,000	55.4
Kentucky	143,200	8,140,000	4,164,000	51.2	16,060	1,995,000	961,000	48.2	159,260	10,135,000	5,125,000	50.6
Louisiana	124,130	6,532,000	4,500,000	68.9	13,810	2,874,000	1,113,000	38.7	137,990	9,406,000	5,613,000	59.7
Maryland	‡143,520	‡1,927,000	‡1,719,000	‡89.2	‡8,220	‡243,000	‡203,000	‡83.5	‡151,740	‡2,170,000	‡1,992,000	‡88.8
Michigan	3,150	104,000	95,000	91.3	200	25,000	14,000	56.0	3,350	129,000	109,000	84.5
Minnesota	(§)	(§)	(§)	(§)	(§)	(§)	(§)	(§)	(§)	(§)	(§)	(§)
Mississippi	22,040	1,433,000	1,025,000	71.5	3,900	1,094,000	315,000	28 8	25,940	2,527,000	1,340,000	53.0
Missouri	335,820	8,444,000	7,364,000	87.2	31,210	3,240,000	2,112,000	65.2	366,830	11,684,000	9,476,000	81.1
Montana	21,050	3,585,000	1,739,000	48.5	4,100	1,767,000	648,000	36 7	25,150	5,352,000	2,387,000	44.6
Nebraska	43,570	2,063,000	1,697,000	82 3	4,800	542,000	353,000	65.1	48,370	2,605,000	2,050,000	78.7
New Mexico	10,870	879,000	614,000	69.9	1,030	873,000	278,000	31.8	11,900	1,752,000	892,000	50.9
New York	$14,290	13,315,000	9,552,000	71.7	30,780	1,807,000	1,289,000	71.3	345,070	15,122,000	10,841,000	71.7
North Dakota	$12,690	$482,000	$315,500	$65.5	$1,370	$261,000	$127,500	$26.3	$14,060	$823,000	$443,000	$53.2
Ohio	1,060,100	57,965,000	36,503,000	63 0	96,930	11,733,000	6,764,000	57.6	1,157,030	69,698,000	43,267,000	62.1
Oklahoma	202,360	18,334,000	8,302,000	45.3	32,890	7,144,000	2,278,000	31.9	236,240	25,478,000	10,580,000	41.5
Pennsylvania	590,510	36,082,000	22,916,000	63.5	53,100	7,409,000	4,457,000	60.2	643,610	43,491,000	27,373,000	62 9
South Dakota	11,040	701,000	606,000	86.4	1,110	649,000	274,000	42.2	12,150	1,350,000	880,000	65.2
Tennessee	37,080	1,618,000	1,465,000	90.5	3,850	1,498,000	577,000	38.5	40,930	3,116,000	2,042,000	65 5
Texas	485,890	26,519,000	21,761,000	82.1	41,130	13,209,000	4,669,000	35.3	527,020	39,728,000	26,430,000	66.5
Utah	†21,990	†1,620,000	†1,149,500	†71.0	†520	†210,000	†78,500	†37 4	†22,510	†1,830,000	†1,228,000	†67.1
Virginia	(‡)	(‡)	(‡)	(‡)	(‡)	(‡)	(‡)	(‡)	(‡)	(‡)	(‡)	(‡)
Washington	(†)	(†)	(†)	(†)	(†)	(†)	(†)	(†)	(†)	(†)	(†)	(†)
West Virginia	149,840	15,701,000	5,851,000	37.3	17,070	4,354,000	1,486,000	34.1	166,910	20,055,000	7,337,000	36.6
Wyoming	14,470	2,451,000	1,134,000	46 3	1,510	1,013,000	354,000	34.9	15,980	3,464,000	1,488,000	43.0
Total, 1932	6,506,540	293,520,000	223,377,000	74.8	530,570	87,367,000	44,000,000	50.4	7,037,110	385,887,000	267,377,000	69.3
Total, 1931	¶6,443,210	294,406,000	205,262,000	70.7	¶517,450	86,491,000	41,347,000	47.8	¶6,960,660	380,897,000	249,609,000	65.5

*Includes data for mixed gas. †Utah includes Arizona and Washington. ‡Maryland includes District of Columbia and Virginia. §North Dakota includes Minnesota. ¶Revised figures caused by revising Oklahoma to following: Domestic, 207,860; commercial, 23,940; total, 230,920.

FIELD PROBLEMS FROM READERS

Edited by Thomas F. Smiley

This department is conducted in order that men connected with the drilling, producing and transporting branches of the petroleum industry may obtain aid in solving problems that confront them in their work. Readers are invited to send questions freely. These questions will be placed in the hands of persons capable of answering them authoritatively, and the answers, based on the best available information, will be published.

Each question should give as much detail as possible, especially if it involves depths of sands, types of sands and operations on adjoining or nearby properties. The source of questions will be considered confidential, and only the initials of the sender will be published. Questions involving patented processes, intricate formulas or estimates of cost cannot be answered. If an immediate answer is important, one will be given by mail when the writer requests it.

In this connection, The Oil and Gas Journal will be glad to publish articles from field men who have devised new methods or improved old ones.

Testing Tubing Packers of Wells by Using Dye as a Dectector

We would like to know of a good cheap dye which would be satisfactory for testing tubing packers, that is, to put in outside of the tubing and then detect in the tubing if the packer is leaking. How are such dyes used?—M. C. C.

Your question is not wholly clear. If you want to test the seat of the packer you have one kind of problem, but if you want to find out whether the packer itself is porous you have another.

Assuming that you want to know of a dye used in oil wells to detect the flow of fluid from one portion of a horizon to another, it is suggested that you obtain some fluorescein, which can be purchased from any pharmacist and will give a yellowish-green color by reflecting light that may be detected by the naked eye when present to the extent of 1 part in 40,000,000.

The dye may be dissolved in a bucket of water poured into the well or lowered in a bailer and if this water passes around the packer seat or through the packer, it would be found in the fluid pumped through the tubing. You would have to separate oil and water by settling, of course, but that and other details should be easy to take care of, and the distinctive color of the fluorescein will permit you to ascertain definitely whether water colored with this chemical has passed from one position in the well to another.

Protecting Fittings in River-Bed Well From Flood Damage

We have a well so near the edge of a small stream that in times of high water the well fittings are in danger of being damaged by driftwood and other objects carried down by a strong current. We are thinking of constructing some sort of protection. It seems likely that operators in other areas have the same problem to meet and I am wondering if you could give us any suggestions concerning the kind of barricade that might be built.—R. O. L.

Owners of river-bed wells in Texas have just about the same situation to meet that you have in order to avoid damage to well casing, connections and christmas trees, which might allow the wells to flow wild, pollute the streams or start fires which might communicate to other wells along the stream or destroy farm crops and forests.

Operators along the Sabine River in Gregg County, Texas, have driven strong pilings around their wells, placed caissons around the casing and tubing, and have also set concrete foundations around the wells to prevent floating debris brought down by high waters, from injuring the casing or connections.

The Rhoads Drilling Co. has gone still further in installing protective equipment around its 64 wells in the Sabine River. George K. Taggart of the company designed as near a fireproof house around the christmas trees as possible. These houses are being made in the company's shops east of Gladewater, and are said to cost around $40 per house, or well.

The framework of the houses, which are called "christmas-tree-houses" or "dog-houses," is made of 4-inch angle irons welded together at all corners. The houses are 30 inches by 42 inches by 54 inches, which gives ample room for the fittings on top of the well, and allows sufficient room for the men to reach in to turn the valves to shut in the wells or open them.

On top of the framework is bolted corrugated building board composed of asbestos and cement. The houses are set on top of the 30-inch caissons which are raised about 30 feet above the water, or plenty high enough to be above the water when it is at flood stage. Inside of the caissons, and between it and the surface pipe, is cement, to give it still further protection against the strong currents of the river.

The houses are bolted into the cement on top of the caissons, thereby anchoring them rigidly. A padlocked door is provided on the bank side of the houses to allow the production men to get at the valves when necessary. These doors have a welded angle iron framework covered with the same asbestos material, and the padlocks prevent thieves or other marauders from tampering with the wells or stealing oil therefrom. It seems not unlikely that a modification of this type of protection would fit your needs.

Relationship of Oil Industry and Society for Testing Materials

There are frequent references in your publication to the American Society for Testing Materials in connection with work, especially experimental work, in the oil industry. May I ask you to tell me what the relationship of this organization to the oil industry is?—R. N. S.

The American Society for Testing Materials is recognized as the logical body to develop and promulgate standard methods of testing petroleum products in this country, because it is representative of both the producer and the user. The petroleum industry is represented on the society's Committee D-2 on Petroleum Products and Lubricants, Technical Committee C on Fuel Oils (including Diesel fuel), Committee D-1 on Preservative Coatings for Structural Materials, Committee D-4 on Road and Paving Materials, and Committee D-8 on Bituminous Waterproofing and Roofing Materials; and is co-operating closely with the work of these committees.

A variety of standard methods of test pertaining to the petroleum industry has been developed by these committees, particularly by Committee D-2, and many of these standards have been adopted as American Petroleum Institute standards. The Institute's secretary of the Division of Refining has served for several years as secretary of Committee D-2, and the greater part of the cost of the secretarial work has been borne by the Institute.

The work of the committee is essential, as the interchange of petroleum products between buyer and seller requires that mutually satisfactory test methods be available to insure that the products meet the desired specifications.

A.S.T.M. Committee A-1 on steel had a group working on specifications for still tubing, composed of representatives from the petroleum industry and from the tubing manufacturers—the representatives from the petroleum industry being the members of the subcommittee on still tubing of the Committee on Standardization of Refinery Equipment.

The A.P.I. is represented on a subcommittee of the joint committee from the American Society for Testing Materials and the American Society of Mining and Metallurgical Engineers on the Effect of Temperature on the Properties of Metal. This joint committee is studying petroleum industry problems in using metals at high temperatures.

Why Was It Called That?

GROUT

The man who works around masonry or road building does not need to be told that grout is a coarse cement or plaster used in building construction or a thin mortar used for filling in joints of macadam, masonry, etc. The word comes from the Anglo-Saxon "grut." In German it meant a porridge made from whole meal. In the South one still frequently hears of hominy grits. A dictionary published in 1713 defined grout as a thick water gruel. Dr. Samuel Johnson's dictionary published in 1755 refers to coarse meal as grout, a Saxon term which in Scotland "they call groats." John Smeaton, a British engineer of the eighteenth century, applied the word to liquid mortar.

Six Types of Water Flooding Are Known in the Bradford Field

Is it true that several different kinds of water flooding are practiced in the Bradford Field? If so, please tell me what these different methods are. How did this way of reviving an oil field come about? Is the whole Bradford Field under flooding now? Are they still trying to improve this flooding method? I would like to know how the system originated. I have been told it started from defective plugging of wells.—T. L. T.

The following information in answer to your questions is provided by C. B. McClintock, chief geologist of the Sloan & Zook Companies, Warren, Pa., who is familiar with the whole subject of water flooding:

Little is known regarding how flooding originated, but, the general supposition is that the first floods started by leaky casing or improperly plugged wells. The results obtained from this experience led to various types of floods which are as follows: Circular, line, four-spot, five-spot, seven-spot and nine-spot. Of the above types, the five-spot and seven-spot are used most.

The first flood developed was circular in shape. It consisted of one intake or water well in the center surrounded by producing wells. It was discovered that one well could not supply sufficient volume of water for the surrounding wells and in many cases the water did not travel in such a way as to follow a circular pattern.

The line flood developed by the Forest Oil Corp. followed next. This consisted of a row of water wells and a row of producing wells, the latter being staggered on both sides of an equally spaced line of water wells. From this method have developed the four-spot, five-spot, seven-spot and nine-spot. Of these methods, the five-spot and seven-spot are the most extensively used at the present time. The five-spot consists of a square with the four intake or water wells at the corners and the producer in the center of the square. The seven-spot resolves itself into a hexagon with water wells at its perimeter and an oil well in the center. The five-spot is more readily adapted to flooding patterns as it fits into the boundary line. With the seven-spot more water can be introduced into the sand per unit length of time.

Some 60,000 acres of the 85,000 acres of productive territory in the Bradford Field are yet to be water flooded. The field has produced approximately 315,000,000 bbls. of oil and the estimated future recovery is 240,000,000 bbls., making a total of a possible 555,000,000 bbls. recovery as water flooding is now practiced. At the present rate of production, the life of the field will be 20 to 25 years. However, continued research work now being carried on in the field will no doubt increase both the total recovery as well as the life of the field.

Oil recoveries of 3,000 bbls. per acre by the old natural method of flooding have been increased considerably by five and seven spotting, and, by core studies of such can conditions as porosity, saturation and permeability. Due to the great variation in permeability in certain sections of the sand body, much oil is retained in the sand after it is considered watered out. Permeability is also the important factor governing well spacing. The tendency today is to increase well spacing with a resultant decrease in development costs.

PERSONAL PARAGRAPHS

WILLIAM TRELEVAN, formerly of Tulsa but now operating in Kansas, was a business visitor in Tulsa.

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CHARLES L. MAGUIRE, president of the Roosevelt refinery, Mount Pleasant, Mich., is spending several weeks in Florida.

* * *

GEORGE FOSTER, vice president of the Devonian Oil Company at Tulsa, was a business visitor to Houston, Tex., the past week.

* * *

HAROLD D. BYRD, of the firm of Byrd & Frost, Inc., Dallas, Tex., flew to New York during the week to transact company business.

* * *

ROBERT W. ATHA, Mount Pleasant, Mich., producer and contractor, has been appointed Michigan agent of the Star Drilling Company, of Akron, Ohio.

* * *

ED OWEN, geologist for L. H. WENTZ, Ponca City, Okla., made aerial photographs of a large territory in the Permian Basin of Texas during the past week.

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C. R. McVEY, Tulsa district salesman for Frick-Reid Supply Corporation, has returned to the office after being confined to his home for several days, because of influenza.

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E. H. EDDLEMAN, Southwest sales manager for International Derrick & Equipment Company, is spending some time in Tulsa, Oklahoma City and other Oklahoma points, calling on the trade.

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RALPH DAVIES, of the Standard Oil Company of California, is in Washington, D. C., on business.

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DR. E. R. LEDERER, general chairman for Refinery District 5, has been attending meetings in Washington, D. C.

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LEONARD ALLEN, scout for the Gulf Production Company, has been transferred to the Corsicana district in Texas.

* * *

A. F. GARRETT, of the Lone Star Gas Company, with offices in Dallas, Tex., spent several days in Tulsa the past week.

* * *

HARRY SMITH, who has been drilling a deep test near Dundas, Ontario, spent the holiday season at his home in Petrolia, Ontario.

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JUDGE AMOS L. BEATY, former chairman of the Planning and Coordination Committee, spent two days in Washington, D. C., attending the meetings of the committee.

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JUDGE C. B. AMES, chairman of the board of the Texas Company, attended the meetings of the Planning and Coordination Committee in Washington, D. C., last week.

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F. R. COATES, chairman of the Refinery Subcommittee of the Planning and Coordination Committee, was in Washington, D. C., to preside at the recent meeting of his committee.

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AXTELL J. BYLES, president of the American Petroleum Institute, spent a couple of days in Washington, D. C., attending the meetings of the Planning and Coordination Committee.

A. M. McCORKLE, vice president of the Stanolind Oil & Gas Company, Fort Worth, Tex., was a business visitor in Tulsa during the week.

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GUSTAV STAUB, Tulsa, plans to leave for a trip that will take him to Monterey, Mexico City Tampico, Vera Cruz, and other Mexican cities.

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VAUGHN W. RUSSOM, of the geological department of the Sinclair Prairie Oil Company, has been transferred to McAlester, Okla., from Jacksonville, Tex.

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K. R. KINGSBURY, president of the Standard Oil Company, has been in Los Angeles, Calif., attending a series of meetings but has returned to San Francisco, Calif.

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RANDOLPH BRANCH, in charge of the royalties division, Federal Securities Committee of the Federal Trade Commission, has returned to Washington, D. C., after business visits to Tulsa and Oklahoma City, Okla.

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H. L. DICKSON, manager, and E. LLOYD BYER, assistant manager, Parkersburg Rig & Reel Company, Tulsa, have just returned from a sales conference held at the company's head office in Parkersburg, W. Va.

* * *

WILLIAM McCRAW, who took office on January 8, as attorney general of Texas, visited the East Texas Field during the week, meeting with the Texas Railroad forces and the Commission's Tender Board at Kilgore, Tex., on January 10.

J. D. WRATHER, head of the Overton Refining Company and Kilgore Refining Company, Overton, Tex., is in New York on a business trip.

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FRED W. BROMBACHER has been made an assistant vice president of the National Bank of Tulsa, in charge of public relations and advertising.

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R. G. A. van der WOUDE, president of the Shell Oil Company, accompanied by MRS. van der WOUDE, has completed a brief business tour of southern California and will leave for New York within the next few days.

* * *

JAMES C. GRAVES, of Saginaw, Mich., chairman of the Michigan Producers Proration Committee, recently returned to his home after spending three weeks in New York City and New Jersey, visiting his son, EBEN GRAVES, and other friends.

* * *

W. F. DEAN, formerly drilling superintendent in the Panhandle district for the Humble Oil & Refining Company, has been promoted to field superintendent, with headquarters at Pampa, Tex., succeeding LAMAR JONES, who was transferred to the company's main offices at Houston, Tex.

* * *

THE Phillips Petroleum Company has been making some changes in its Breckenridge, Tex., division office. L. B. HOLLAND, district superintendent, has been moved to Midland, Tex.; RALPH CLARK, petroleum engineer, was transferred to Jal, N. Mex.; and JACK BENNETT, chief clerk, has been transferred to Oklahoma City, Okla.

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RAY E. MILLER, vice president in charge of sales for Hanlon-Buchanan, Inc., Tulsa, was called to Mexico, Mo., by the illness of his mother.

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H. C. STRUTH, allocator for District 5(b), has been attending meetings of the district allocators in Washington, D. C., for several days.

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CHARLIE HOFFMAN, with the Southland Royalty Company at Fort Worth, Tex., was a business visitor to Houston, Tex., the past week.

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JACK LAMB, with Gulf Production Company at Fort Worth, Tex., was a recent business visitor to the company's offices at Houston, Tex.

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F. R. STALEY, of the technical department of the Max B. Miller Company, with offices in New York City, is visiting refineries in the Mid-Continent area.

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MR. and MRS. WESLEY WEED are the parents of a 7½-pound daughter which arrived January 10. Mr. Weed is scout for the Sun Oil Company at Houston, Tex.

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E. E. HIBBARD and E. N. AVERY, of the Asiatic Petroleum Company, with offices in London, England, expect to spend a week or 10 days in Los Angeles and San Francisco, Calif., taking care of special business.

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PERCY C. JONES, who became actively engaged in the sucker rod business with the S. M. Jones Company in 1897, and who was elected president of the company in 1908, was re-elected for the twenty-sixth consecutive year at the annual meeting of the company this month.

DO YOU REMEMBER?

From The Oil and Gas Journal Files

25 Years Ago

January 15, 1910

Houston, Tex., wants gas from the Caddo Field, Louisiana, and a committee from the Houston Business League is investigating. If the committee approves, Houston capital may build the gas line. The city is 200 miles from the field.

Lone Star Gas Co.'s 40,000,000-foot gasser in the Petrolia Field, Texas, has been shut in after flowing wild for 58 days.

Arthur Knapp, of Houma, La., has applied for a patent on a rotary drilling bit. The working portion of the bit is of manganese, but the patent is being asked on the method of socketing it without the use of threads.

20 Years Ago

January 14, 1915

Nearly 1,300 old wells were abandoned in the Central West Fields of Lima, Indiana, and Illinois in 1914. They could not pay their way.

H. F. Sinclair says all plans for a pipe line from the Cushing Field to the Gulf Coast have been abandoned by the firm of White & Sinclair, because of the apathy of Oklahoma producers. "They prefer 30-cent oil under existing conditions to 75-cent oil and an enlarged market," says Mr. Sinclair.

The United States produced 265,763,000 bbls. of crude oil in 1914 at an average price of 81 cents per barrel.

10 Years Ago

January 15, 1925

Production in the Wortham Field, Texas, jumps from 78,000 bbls. to 152,000 bbls. per day in one week. It has 52 completed wells and is not eight weeks old!

Sinclair Oil & Gas Co. gets the first deep sand showing in the Garber Field in Oklahoma at 3,316 feet in its No. 25 Belveal. Drilling was resumed. It is a Siliceous lime test.

Midwest Refining Co. gets 4,000 bbls. initial production and 16,000,000 feet of gas in a Lakota sand test in the Salt Creek Field.

Sir John Cadman, home in England from a Persian trip, says the Persian oil field will be the greatest in the world.

T. P. Thompson, Sr., of Bradford, Pa., in the oil business since 1861, dies at his winter home in Florida. He left the Petrolia Field, Ontario, in 1866, and moved to Pleasantville, Pa. He was very successful and at his death left a comfortable fortune. Mr. Thompson helped to develop the famous Cherry Grove Field.

WALTER RENNIE, of Denver, Colo., formerly geologist for the Texas Company, was in Casper, Wyo., several days last week.

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E. H. MOORE, president of the Independent Oil & Gas Company, arrived in Los Angeles, Calif., from Tulsa for a few days on a business mission.

* * *

R. G. TAYLOR, of Denver, Colo., was in Casper, Wyo., early in the week. He had been in the northern part of Wyoming looking after oil holdings.

* * *

JOHN DAVIS, formerly connected with the Federal Tender Board at Kilgore, Tex., has been transferred back to Washington, D. C., by the Petroleum Administrative Board.

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D. M. SECOR, geologist for Skelly Oil Company at Houston, Tex., addressed the Houston Geological Society at its regular meeting last week. Mr. Secor's subject was on the Hull salt dome.

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HENRY G. NEVITT and C. P. HUGHES, of the White Eagle Corporation, Kansas City, Mo., were in Casper, Wyo., several days last week. Mr. Nevitt was formerly a resident of Casper.

* * *

W. T. HARDENDORF, of Billings, Mont., stopped off in Casper, Wyo., for a short while on his way to Denver, Colo. He was accompanied from Thermopolis, Wyo., by CHARLES (RED) HILL.

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CHARLES E. McCULLOUGH, technical representative for the Foster Wheeler Corporation, of New York City, is spending several weeks visiting refineries in the Mid-Continent area. Mr. McCullough recently returned to this country from an extended business trip in England.

* * *

ALF M. LANDON, Independence, Kans., operator, began his second term as governor of Kansas Monday.

* * *

M. C. HOFFMAN, chief production engineer of the Stanolind Oil & Gas Company, spent last week in Texas.

* * *

J. P. ROBERTS, an assistant to THEO. A. MORGAN, state umpire of Kansas, spent his holidays at Fort Smith, Ark. He returned to Wichita, Kans., last week.

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S. P. GATES, superintendent of production in western Kansas for the Empire Oil & Refining Company, was called to Marshall, Ark., by the illness of his father.

* * *

JOHN E. (JACK) FLANAGAN, superintendent of the land department of the Texas Company, spent several days visiting the districts of Oklahoma and Kansas.

* * *

B. H. MURPHY, formerly in the Anadarko, Okla., office of the Indian service, is now on the staff of the Mid-Continent station of the U. S. Geological Survey in Tulsa.

* * *

H. B. DUFFIELD, Mid-Continent representative of Youngstown Sheet & Tube Company, and his bride, formerly MISS NELLIE B. SANTROCK, who were married several weeks ago, have returned from their honeymoon trip and are now residing in Tulsa.

* * *

IRA E. DUGAN, deputy umpire of the Oklahoma Corporation Commission in the Fitts Pool in Oklahoma, with headquarters at Ada, has been in Texas on a business trip and visited the offices of the Texas Railroad Commission at Kilgore during the past week.

Moving Spirit in Shell's Expansion

George Legh-Jones, made chief executive officer of the Royal Dutch-Shell interests several months ago and transferred to London, England, was the moving spirit in the tremendous expansion of Shell's interests on the Pacific Coast.

GEORGE LEGH-JONES

Mr. Legh-Jones went to the Pacific Coast in 1922 as president of Shell Oil Company (then Shell Company of California). At that time the company had oil production only in the Coalinga oil fields and refineries at Martinez and Coalinga, Calif. Its marketing activities were restricted to a few of the major metropolitan centers on the coast. Today Shell Oil Company has refineries in Coalinga, Martinez, Wilmington and Dominguez, Calif., and in Shellburn, British Columbia. It has production in every important oil field in California and its marketing activities extend throughout California, Oregon, Washington, Nevada, Arizona, New Mexico, Idaho, Montana, Utah and Wyoming, the territory of Hawaii, and the province of British Columbia. The Shell Building in San Francisco was completed in 1930. Mr. Legh-Jones was directly responsible for the conception and completion of this magnificent structure.

Mr. Legh-Jones always has occupied a leading position in the petroleum industry. He long has been a director of the American Petroleum Institute. In 1933 he was made chairman of the Pacific Coast Regional Marketing Committee under the national code of fair competition for the petroleum industry. Mr. Legh-Jones was one of the promoters of the Pacific Coast Petroleum Agency, organized to stabilize the Pacific Coast petroleum industry and eliminate chaotic marketing conditions.

As Sir Henri Deterding's immediate assistant, Mr. Legh-Jones is in direct charge of the Royal Dutch-Shell Group's interests in both North and South America.

WARREN S. CHURCHILL, president of the Oklahoma-Kansas Drilling Association, and vice president of the national association, and WILLIAM HOLDEN, executive vice president of the national association, were in Dallas, Tex., attending a meeting of the Texas-Louisiana-New Mexico Association.

* * *

MISS PATRICIA HILL, daughter of FRANK F. HILL, director of production for the Union Oil Company, and FREDERICK McHARGUE, employed by the Union Oil Company, have announced their marriage. Mr. McHargue is a graduate of Northwestern University and Miss Hill a graduate of the Cumnock School for Girls.

* * *

W. H. DOW, president of the Dow Chemical Company and Dowell Incorporated; N. R. CRAWFORD, general manager of Dowell Incorporated; and DR. J. GREBE, head of the physical research department of the latter company, all from the executive offices at Midland, Mich., are making an extended tour through the Mid-Continent fields. They visited Fort Worth, Tex., on January 11.

* * *

H. F. STOVER, Gaso Pump & Burner Manufacturing Company, is the new president of the Purchasing Agents Association of Tulsa, succeeding W. L. JAMES, Stanolind, who has been president for nearly a year and a half, having succeeded PAUL FENTON, Tide Water Oil Company, when Mr. Fenton was transferred to New York. Mr. James is the new national director, succeeding H. D. PATRIDGE, Indian Territory Illuminating Oil Company, Bartlesville. H. A. WILSON, Superior is the new first vice president; C. M. TAYLOR, Indian Territory Illuminating Oil Company, Partlesville, second vice president; M. F. BRIDGES, Tide Water Oil Company, secretary-treasurer, succeeding W. R. BROWN, Marathon Oil Company; H. M. COSGROVE, executive secretary, and E. R. WELCH, assistant secretary.

HARRY LEYENDECKER, chief scout for the Tide Water Oil Company, with headquarters at Houston, Tex., has returned from a business trip to East Texas.

* * *

J. H. McLAREN, land man and scout for the Phillips Petroleum Company for the Gulf Coast division, with headquarters at Houston, Tex., spent several days at the company's offices at Bartlesville, Okla.

* * *

C. E. ARNOTT, president of Socony-Vacuum Oil Corporation, has been in Washington, D. C., for several days attending meetings of the Marketing Subcommittee of the Planning and Coordination Committee, of which he is chairman.

* * *

W. R. BOYD, JR., chairman of the Refinery Board of Review and executive secretary of the American Petroleum Institute, presided at the recent meetings of the board at Washington, D. C. P. M. MISKELL, C. B. WATSON, CHARLES BUERGER, and A. C. McLAUGHLIN, members of the board, were also in attendance.

* * *

FATHER JULIUS A. NEWLAND, professor of organic chemistry, University of Notre Dame, South Bend, Ind., has been awarded the Nichols medal of the New York Section of the American Chemical Society. This honor is in recognition of his work on the syntheses from unsaturated hydrocarbons.

* * *

H. L. MAGEE, of Regina, Saskatchewan, western sales manager for Imperial Oil, Ltd., has been appointed sales manager for Canada, and left recently for the head office at Toronto where he will be located. The position of western sales manager will not be filled, Mr. Magee planning to carry out that work along with his new duties.

* * *

C. R. HETZLER, of Rock Springs, Wyo., superintendent of operations for the Mountain Fuel Supply Company, was in Casper, Wyo., last week.

* * *

GEORGE P. HARRINGTON, factory engineer for Hewitt Rubber Corporation, Buffalo, N. Y., is making his headquarters in Tulsa while FRANK E. BOYER, Tulsa manager for the corporation, is recuperating from injuries received about three weeks ago, when tesitng rotary equipment in a laboratory.

* * *

W. G. SKELLY, president, and H. M. STALCUP, vice president, attended a divisional sales meeting of Skelly Oil Company in Wichita, Kans. C. C. HERNDON, vice president, and W. P. Z. GERMAN, general counsel of the Skelly company, were in the northern midwestern states attending similar divisional meetings.

* * *

CHARLES F. ROESER, independent operator of Fort Worth, Tex., of the firm of Roeser & Pendleton, signed for the inaugural transcontinental flight of the American Airlines, leaving Fort Worth, Tex., at 8:10 a.m. Monday to make the trip to New York on business. SEWARD SHELDON, formerly a vice president of the Marland Oil Company, but now manager of the Forth Worth Press, Fort Worth, also made the trip from this city to New York.

* * *

BEN H. KING, of Mission, Tex., partner in the firm of King-Woods Oil Company, driller of the discovery well in the Sam Fordyce Field, was elected president of the Sam Fordyce Operators Association at a meeting. He succeeded W. A. MONCRIEF of Fort Worth, Tex., of Showers & Moncrief, well known Texas independent operators, who offered his resignation to permit election of a Valley man to the office. Mr. King had been vice president of the association, of which PAUL ROGERS, of the Heep Oil Corporation, is secretary.

MARKET RECORD OF OIL SECURITIES

Active Oil Stocks Listed on New York Stock Exchange

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1935 High	1935 Low	Week ended January 12 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1934	1934 High	1934 Low	1933 High	1933 Low
53¼	48½	6,300	53¼	48½	50¼	Amerada Corp.	774,875	N.P.	50cQ	1-31-35	$2.00	55⅝	39	47⅝	18½
25⅝	24¼	11,800	25⅜	24¼	24½	Atlantic Refining	2,673,834	$25	25cQ	12-15-34	1.00	35¼	21½	32½	12⅜
7	6¼	8,000	7	6⅜	6⅜	Barnsdall Corp. A	2,248,795	$5	....	5-11-31	....	10	5⅞	11	3
7¾	6⅞	32,200	7¾	6⅞	7	Columbia Gas & Elec.	11,610,036	N.P.	....	5-15-34	‡ .25	19¼	6⅝	28⅛	9
8¾	7¾	21,800	8⅝	7¾	7¾	Consolidated Oil Corp.	14,218,835	N.P.	14c	10-31-34	.42	14¼	7¼	15¾	5
19¼	17⅜	19,600	18⅞	17⅜	17½	Continental Oil of Delaware	4,738,593	$5	25c	10-31-34	.50	22¾	15¾	19⅝	4⅞
18⅞	16¼	17,200	18⅞	16⅞	17⅝	General Asphalt	387,149	$10	....	6-15-32	....	23½	12	27	4⅝
3⅜	2⅞	2,200	3¼	2⅞	2⅞	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	5⅝	2½	7⅜	1⅞
1⅞	1	6,300	1⅞	1	1¼	Louisiana Oil Refining	1,302,158	N.P.	....	.....	....	3⅜	¾	4	⅝
12⅞	11⅛	8,800	12⅞	11⅛	11⅛	Mid-Continent Petroleum	1,857,912	$10	25c	11-15-34	.50	14¾	9⅛	16	3¾
14⅝	12¾	1,500	14⅛	12¾	12¾	National Supply of Delaware	382,591	$25	....	5-15-31	....	21⅛	10	28⅝	4
10⅞	9¾	19,700	10¾	9¾	9⅞	Ohio Oil Co.	6,563,107	N.P.	15c	12-15-34	.45	15⅞	8½	17⅝	4¾
8½	7¼	1,100	8¼	7¼	7¼	Pacific Western Oil	1,000,000	N.P.	40c	11-30-34	.40	9⅝	5½	9½	3
1⅝	¾	1,400	1⅝	⅞	⅞	Panhandle P. & R.	198,770	N.P.	....	.....	....	2½	⅝	4¼	⅜
16	14½	16,500	15¾	14½	14⅝	Phillips Petroleum	4,154,687	N.P.	25c	12-1-34	1.00	20⅜	13⅜	18¾	4¾
8¾	7¾	6,300	8¾	7¾	7¾	Plymouth Oil Co.	960,261	$5	4% Stk.	12-22-34	75c & 4% Stk.	16¾	7¼	17⅝	6¾
7¾	6⅝	16,100	7¾	6⅝	6⅝	Pure Oil	3,038,370	N.P.	....	9-1-30	....	14⅞	6⅛	15⅜	2½
31⅜	29¾	1,100	31⅜	30¼	30⅝	Royal Dutch N. Y. shares	432,224	$14	$1.35	7-31-34	1.35	39⅛	28⅝	39¾	17⅝
26⅞	24	3,500	26⅞	24	24	Seaboard Oil of Delaware	1,204,460	N.P.	15cQ§	12-15-34	1.00	38⅜	20¾	43⅜	15
7⅞	6¾	8,500	7⅞	6⅞	6⅞	Shell Union Oil	13,070,625	N.P.	....	6-30-30	....	11½	6	11⅝	4
71¼	68¾	2,400	71¼	68¾	69¼	Shell Union Oil pfd.	400,000	$100	....	7-1-31	....	89	57	61	28½
18⅝	15¾	24,000	18⅝	16⅝	17½	Simms Petroleum	461,000	$10	50c	2- 1-35	.55	17⅛	7¼	12⅜	4⅞
7⅛	7	600	7⅛	7	7	Skelly Oil	1,008,514	$25	....	12-15-30	....	11½	6	9⅞	3
14⅞	13⅝	34,000	14⅞	13⅝	13⅞	Socony-Vacuum	31,019,694	$25	15cQ	12-15-34	.60	19⅞	12½	17	6
32⅜	30⅜	13,000	32	30⅜	30½	Standard Oil of California	13,102,900	N.P.	25c	12-15-34	1.00	42⅞	26½	45	19½
25½	24⅝	12,100	25⅛	24⅝	24¾	Standard Oil (Indiana)	15,941,894	$25	25cQ	12-15-34	1.00	32¾	23¼	34	17
30¼	30¼	No sales ..	..	..	..	Standard Oil of Kansas	200,000	$10	50cQ	10-31-34	2.00	41	26	39⅞	12¾
43½	41⅜	36,200	43½	41⅜	42	Standard Oil of New Jersey	25,740,065	$25	50cSA§	12-15-34	1.25	50⅛	39¼	47½	22¾
67½	65¼	500	67½	65¼	65¼	Sun Oil	1,733,013	N.P.	25cQ†	12-15-34	$1 & 9% Stk.	74¼	51½	59	35
21⅝	19⅜	20,200	21⅝	19⅜	19⅞	Texas Corp.	9,486,417	$25	25cQ	1-1-35	1.00	29⅜	19⅝	30⅛	10¾
3⅞	3¼	4,100	3⅞	3¼	3¼	Texas Pacific Coal & Oil	880,703	$10	....	12-31-29	....	6½	2½	6½	1⅜
10	8¾	14,000	9⅝	8¾	8⅞	Tide Water Associated	5,618,672	N.P.	....	2-16-31	....	14⅜	8	11¾	3⅛
87½	84	1,100	87½	84	85	Tide Water Associated pfd.	666,524	$100	$2.	12-22-34	‖8.50	87	64½	65¼	23½
16⅝	15⅝	4,400	16⅝	15⅝	15⅝	Union Oil of California	4,386,070	$25	25cQ	11-10-34	1.00	20½	11½	23⅜	8½
26⅛	25¼	3,200	26¼	25¼	25⅛	Union Tank Car	1,200,000	N.P.	30cQ	12-1-34	1.20	25¾	15⅝	22⅜	10½
2⅝	2¼	1,200	2⅝	2¼	2¼	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	5¾	2	5½	2

*Ex-dividend. †Plus extras in common stock. §Plus extras. ‡Payable in 5 per cent convertible preference stock. ‖On account of accumulated dividends.

Active Oil Stocks Listed on New York Curb

Compiled by Carl H. Pforzheimer Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

1935 High	1935 Low	Week ended January 12 Sales	High	Low	Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1934	1934 High	1934 Low	1933 High	1933 Low
33	32	150	33	33	33	Buckeye Pipe Line Co.	200,000	$50	75cQ	12-15-34	$3.00	38	26	39¾	25
2¾	2	1,600	2¾	2⅛	2⅛	Carib Syndicate	799,020	25c	....	.....	....	5½	1½	7¾	¼
147½	143	250	147½	143	143	Chesebrough Mfg. Co.	120,000	$25	$1Q†	12-28-34	11.50	150	116	129	71
1½	1⅜	20,300	1½	1⅜	1⅜	Cities Service	37,804,394	N.P.	....	6-1-32	....	4¼	1¼	6¼	1½
⅛	⅞	100	⅛	⅛	⅛	Colon Oil	2,200,000	N.P.	....	.....	....	3¼	½	4	¼
¾	⅝	1,300	¾	⅝	⅝	Cosden Oil	399,687	$1	....	.....	....	3⅞	½	3⅞	1⅜
13⅜	12⅜	9,700	13⅛	12⅜	12½	Creole Petroleum	6,974,356	$5	....	.....	....	14⅜	9⅝	12	4¾
4⅞	4⅞	200	4⅞	4⅞	4⅞	Darby Petroleum	509,696	$5	25c	1-25-35	.50	7½	4⅛	8	2⅛
1⅛	1⅛	200	1⅛	1⅛	1⅛	Derby Oil & Refining	263,162	N.P.	....	.....	....	2¼	1	2¾	⅞
34	34	No sales ..	..	..	..	Eureka Pipe Line	50,000	$100	$1Q	11-1-34	4.00	37	30	41¾	20
60⅞	56½	7,100	60¼	56½	58	Gulf Oil Corp.	4,538,101	$25	....	10-1-31	....	76¾	49¾	62	24
48⅛	44⅞	8,800	48	44⅞	44⅞	Humble Oil & Refining (new)	8,923,935	N.P.	25cQ	1-2-35	‖1.25	49½	33¼	105½	40
17⅛	16¾	4,600	17⅛	16¾	16¾	Imperial Oil of Canada	26,857,152	N.P.	25cSA†‡	12-1-34	.92½	17⅞	12⅝	15⅞	6½
4⅛	3¾	300	4	4	4	Indiana Pipe Line	300,000	$10	15cSA†	11-15-34	.35	6⅞	3⅝	8	3⅛
31⅜	29⅛	11,600	31¼	29⅛	29¾	International Petroleum	14,247,088	N.P.	56cSA†‡	12-1-34	2.28	33⅜	19⅜	23½	8⅞
5	4⅝	8,100	5	4⅝	4⅝	Louisiana Land & Exp.	3,000,000	N.P.	....	.....	....	5	2⅛	2¼	⅞
4⅜	4⅜	No sales ..	..	..	..	Lion Oil Refining	270,000	N.P.	....	10-27-30	....	6	3⅜	9½	1¼
6¼	5¼	4,400	6¼	5⅜	5⅜	Lone Star Gas	5,382,723	N.P.	15c	2-15-35	¶ .16	8⅜	4¼	11⅞	4¾
4⅝	4⅛	1,100	4½	4⅛	4¼	Mountain Producers	1,682,182	$10	15cQ	1-2-35	.60	5½	4	6¼	2½
13½	13	3,100	13½	13	13⅜	National Fuel Gas	3,810,183	N.P.	25cQ	10-15-34	1.00	18⅛	13⅛	20	10
7½	7¼	No sales ..	..	..	..	National Transit	509,000	$12.50	35cSA	12-15-34	.75	9½	7	10	5¼
2⅝	2½	1,700	2⅝	2½	2⅝	New Bradford Oil	1,445,202	$5	10c	9-15-34	.20	2½	1¾	2¼	¼
2⅛	1⅝	3,100	2⅛	1⅝	1¾	New Mexico and Arizona	1,000,000	$1	....	.....	....	2¾	1	1⅞	⅛
3½	3¼	500	3½	3¼	3¼	New York Transit	100,000	$5	15cSA	10-15-34	.30	4¾	3	4⅞	.5
5¼	5¼	200	5¼	5¼	5¼	Northern Pipe Line	120,000	$10	25cSA	1-2-35	.50	7	4⅝	6⅛	4½
2½	1¾	3,500	2	1¾	1⅞	Pantepec Oil	1,608,700	N.P.	....	.....	....	2⅝	⅞	3¾	⅛
1⅛	1⅛	300	1⅛	1⅛	1⅛	Ryan Consolidated	296,931	N.P.	....	.....	....	3⅜	⅞	4¼	⅝
6¼	6	1,300	6¼	6	6¼	Salt Creek Producers	1,496,859	$10	20cQ	2- 1-35	.80	7⅞	5½	9¼	3½
23¾	22¾	2,500	23¾	22¾	22¾	South Penn Oil	1,200,000	$25	30cQ	12-31-34	1.20	26½	17½	22½	11
3⅞	3⅞	100	3⅞	3⅞	3⅞	Southern Pipe Line	100,000	$10	15cSA	9-1-34	.25	5½	3½	6	2⅛
50	50	No sales ..	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$1Q	12-31-34	5.00	47	41	43	24½
18¾	18	7,000	18¾	18¼	18½	Standard Oil of Kentucky	2,606,983	$10	25cQ†	12-15-34	1.50	18⅜	14⅝	19¼	8⅝
9	9	100	9	9	9	Standard Oil of Nebraska	190,822	$25	....	6-20-34	.50	16⅞	8¼	20½	11
15	14	950	15	14	14	Standard Oil of Ohio	753,740	$25	....	1-3-33	....	28½	12¼	41	15½
1¼	1⅛	5,700	1¼	1⅛	1⅛	Sunray Oil	1,610,810	$1	....	4-15-31	....	2	⅛	1½	⅛
6⅞	6⅛	2,000	6⅞	6⅛	6½	Texon Oil & Land	936,028	N.P.	15cQ†	12-29-34	.90	11	4⅜	13¾	3⅛

*Ex-dividend. †Plus extras. ‡Payable in Canadian funds. §Payable in preferred stock. ‖Includes 50 cents on old $25 par value stock. ¶Payable in preferred stock.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups.

Eastern Fields

(Continued from Page 56)

& Gas Corp. is drilling No. 1 on the Lizzie Moore farm. It is about 170 feet northwest of the test on the W. R. Miller farm. W. B. Heeter has passed the 1,000-foot level on the Heeter and others lease. K. M. Hunt and others have a location on the T. J. Murray farm. In Smithfield district, Spencer Natural Gas Co. has part of the material on the ground on the R. R. Young farm. Howard Bartlett and others are down 1,540 feet on the C. C. Brannon farm. In Geary district, United Fuel Gas Co. has a rig standing on the Samuel Hemsley farm, No. 4,541.

In Wirt County, Mason and others have a location on the D. C. Woods farm in Burning Springs district. In this district, Glen Roberts and others have locations on the Withers and Vandevender farm and for a second test on the N. T. McConaughey & Co. lease. J. B. and W. R. Busch have rigged up on the J. M. Wilson heirs farm.

In Tyler County, Gilco Oil & Gas Co. is down 1,930 feet on the William Way farm. In Sheridan district, Calhoun County, T. W. Elliott & Co. have made a location on the Guy Freed and others lease.

Michigan Fields

(Continued from Page 52)

County, after striking a half barrel show of oil in the upper Traverse at about 1,400 feet.

Three other western Michigan wildcats, one each in Mason, Manistee and Kent Counties, were reported nearing possible completion in the Traverse or Dundee formations as the week closed.

Dragoon Development Co., of Muskegon, headed by Robert C. Lentz, had reached a depth of more than 1,500 feet in its No. 1 W. K. Young, SW NW NW Section 15-16n-15w, Logan Township, Mason County. Mr. Lentz reported formations running higher than in a nearby 8-bbl. well drilled into the upper Traverse pay sands at about 1,900 feet several years ago and recently reopened, cleaned out and placed on production by Mr. Lentz. It is located about 50 miles north of the Muskegon Field.

Fischer-Robbins Oil & Gas Co.'s No. 1 fee, NE SW Section 14-24n-16w, Arcadia Township, Manistee County, near the village of Arcadia, also was nearing completion in the Dundee at about 1,200 feet after striking a show of gas and oil in the upper Traverse recently at 1,088 feet.

Formations also are reported running comparatively high in F. Irwin Bryan and Harry T. Martin's No. 1 A. G. Aldrich, NE SW SW Section 3-8n-11w, Plainfield Township, Kent County, located several miles north of Grand Rapids.

No drilling projects were active in Muskegon or Oceana Counties.

New Locations

Fifteen West Branch Township, Ogemaw County, locations were taken out by five operators, namely, Ide Oil & Gas Corp., Roy F. Ide, trustee, Muskegon Development Co., W. J. Sovereign and John C. Newell.

Ide Oil & Gas Corp.'s new locations include: No. 2 Jane M. Donavan, SE SE NW Section 12-22n-2e; No. 3 Jane M. Donavan, SW SE NW Section 19, same township; No. 4 Jane M. Donavan, NW SE NW Section 19, and No. 2 Harry Shubert, SW NE NW Section 19. Two were taken out in the name of Roy F. Ide, trustee, including No. 1 U. and E. Wilcox, NW NW NW Section 28, and No. 2 U. and E. Wilcox, SW NW NW Section 28.

Muskegon Development Co. took out three permits, namely: No. 1 Alvin C. and Louise Garnett, NW SW NW Section 28; No. 1 H. W. and Lulu Schulty, NE NE SE Section 29, and No. 1 Arthur Fisk, SE SE NE Section 29.

W. J. Sovereign, of Bay City, took out two permits for his No. 1 Edith E. Donavan, SW SW NW Section 19, and No. 2 Golf Club, NE SW SW Section 20.

John C. Newell took out four permits for additional wells on the Victor Nelson lease including No. 2 Victor Nelson, NW NE SE Section 33; No. 3, SW NE SE, same section; No. 4, SE NE SE, same section, and No. 5, NE SE SE, Section 33-22n-2e.

Muskegon Oil Corp. also took out a permit for No. 2 Harriet Wilson, NE SE NE Section 24-22n-1e, Ogemaw Township and County, in another section of the Ogemaw Field.

Five other permits include three wildcats and two tests in proven areas.

Chippewa Oil & Gas Co. received a permit for No. 1 Carl Rhode, C SW NE Section 15-14n-6w, Broomfield Township, Isabella County, a gas test, while McClanahan Oil Co. took out a permit for No. 1 E. J. Hamlin and others, SE NE SE Section 29-14n-2w, Greendale Township, Midland County.

Three wildcats include Roosevelt Oil Co.'s No. 1 Arnold Haviland, SE NE SE Section 4-17n-2w, Beaverton Township, Gladwin County; Wallace Markle's No. 1 Frank Opaka, NE NE SE Section 4-15n-11e, Grant Township, Huron County, and William F. Wiecher's No. 1 Glenn H., Lynn E. and David S. Gray, NE SW SW Section 8-12n-8e, Juanita Township, Tuscola County.

West Michigan Consumers Co., of Muskegon, also announced it will drill two former Traverse and Dundee wells to the Monroe gas sands. They are the former Fleeger-Ohlson's No. 1 Stanley Daniloff, SW SW SE Section 5-10n-16w, and No. 3 Fred Hartman, SE SE NW Section 9-10n-16w, both in Muskegon Township and County.

West Michigan also will clean out and resume production of the former John R. Cox' No. 1 John B. Nichols, SW SE NW Section 8, same township, estimated good for 75,000 to 100,000 feet daily from the Monroe sands into which it was drilled in 1931 as one of the largest Monroe gas wells at that time.

Gulf Coast Fields

(Continued from Page 51)

10s-1e, made a drill stem test from 6,834-69 feet, and in eight minutes it recovered 12 thribbles of mud and salt water, with a slight scum of oil and a slight show of gas. It is bottomed at 6,889 feet.

Same company's No. 1-B Industrial Lumber Co., on its Lunita prospect, Calcasieu Parish, was abandoned at 9,352 feet. This is one of the deepest wildcat tests to be drilled on the Gulf Coast. Location is in Section 27-8s-12w, approximately 5 miles northeast of Starks.

In Jefferson Davis Parish, Strake Oil Co.'s No. 1 Calcasieu National Bank, 5 miles northeast of the Iowa Field and 3 miles northwest of the Welsh Field, was added to the 8,000-foot test being drilled in the district. Late in the week it was drilling in shale below 8,012 feet.

Gillis Area

Operations in the Gillis area, Calcasieu Parish, are gaining headway each week, of the eight existing well locations recently made, six are active. Fohs Oil Co.'s No. 1 O. H. Castle, which made its appearance as a gasser two weeks ago from a depth of 6,917 feet, is being freed of liner and screen, for a resetting a few feet deeper. It will probably be tested the latter part of the week, and if it makes a producer it will extend the producing limits 1 mile south. It is in Section 14-9s-8w. Union Sulphur Co.'s No. 1 Powell Lumber Co. north offset to its No. 1 State is drilling in sticky shale below 5,008 feet and should be close to the pay by the end of the week. Its No. 1 Buhler estate on the south side of the river opposite the discovery well, No. 2 Barbe, is drilling in shale below 1,006 feet. Same company's No. 2 State offsetting the Barbe producer is drilling below 1,357 feet after cementing 10-inch casing at that depth. The company made location for its No. 1 O. H. Castle, an offset to Fohs Oil Co.'s test, and is now building rig foundation. The company is waiting on a permit for its No. 3 State. Texas Co. is moving in material for its No. 1 Nickerson, located across the river from No. 1 State. The recent location made by Fohs Oil Co. for its No. 1 McIver has received no operation as yet.

Oklahoma Fields

(Continued from Page 55)

cat, was dry and abandoned at 803 feet, total depth corrected.

Stephens County

A. A. Peard's No. 2 Impson Smith, NW SW SE Section 12-3s-6w, was dry and abandoned at 753 feet.

Ed Saunders' No. 5 Hightower, SW NE NE Section 15-3s-5w, Loco Pool, was an abandoned location.

Stephens County first reports were as follows: Mudge Oil Co.'s No. 2 Stephens, NE SW Section 16-1s-5w, drilling 740 feet; Reese Drilling Co.'s No. 1-A Jones, NW SW SE Section 23-1s-5w, slush pits.

California Fields

(Continued from Page 59)

and this deep test may be given a production test within the next 60 days. In the Midway-Sunset Field of Kern County the Honolulu Oil Corp. has finished No. 22 in Section 14-32-24 and this new well was brought in flowing 119 bbls. of very clean 24.2 gravity oil per day from 3,090 feet. This well almost blew out several times during the course of drilling and is making considerable gas in addition to the oil produced. The Honolulu's last previous completion in this area was No. 53-8-D, which came in doing 1,000,000 feet of gas per day with only a spray of oil.

Seal Beach

The Associated Oil Co. recompleted a splendid well in the Seal Beach Field of Los Angeles Basin when No. 13 Bryant was returned to production flowing 2,784 bbls. of clean 29.4 gravity oil per day. This well, which was redrilled and deepened to the McGrath zone, was finished at 6,510 feet. One new well and two recompletions were registered in the Huntington Beach Field this week. The Standard successfully completed No. 25 P. E. at 3,961 feet after finishing the hole with a 4¾-inch liner carrying 176 feet of perforated. This new well showed an initial daily production of 251 bbls. of clean 24.9 gravity oil upon completion. The Petroleum Co. listed two recompletions when No. 1 fee was returned to production pumping 352 bbls. 24.5 gravity oil per day from 5,062 feet and No. 2 Wilson brought in pumping 73 bbls. of 23.4 gravity oil per day from 3,866 feet.

There was no change in the status of town lot acreage in the Playa Del Rey Field as the Los Angeles city council has not yet made the necessary revision in the zoning ordinance to permit drilling. Several operators holding acreage between the subdivided area and the older section of the Playa Del Rey Field are prosecuting work with as much speed as possible in order to get down into the pay before the big parade starts on the adjoining town lot acreage. Charles W. Fourl is ready to spud his No. 2 Monarch. The hookup on this well is especially interesting because, as far as can be recalled, it is rather unique. Several weeks ago Fourl constructed cement foundations and a cellar for his No. 2 but ran into difficulty because of its location. He moved over about 25 feet and built another foundation, erected a steel rig and is now about ready to go. Unable to use the original rig foundation because it was too close to the property line he has decided to use the cellar as a mud sump and has accordingly rigged up the mud pumps in the base of the original cement foundation.

The Madison Oil Co. completed a new well in the Long Beach Field early this week when No. 1 Signal was completed pumping 86 bbls. of 27.1 gravity oil per day from 5,467 feet after the hole had been finished with a 5¾-inch liner carrying 424 feet of perforated. The Texas Co. recompleted No. 3 Schilling pumping 182 bbls. of 25.0 gravity oil per day after the hole had been cleaned out to bottom, 4,130 feet. Drilling operations in this field have gradually but consistently been getting smaller during the past several months and before long most of the work in this field will consist of reconditioning jobs.

Kansas Fields

(Continued from Page 62)

lind Oil & Gas Co.'s No. 1 Baxter, NE NW Section 5-14-15w, location; Stanolind Oil & Gas Co.'s No. 1 Dortland, NE SW Section 5-14-15w, location; Stanolind Oil & Gas Co.'s No. 6 Mermis, NW NE Section 5-14-15w, location; Streeter & Stearns Drilling Co.'s No. 1 Ball, NE NW Section 16-14-15w, cellar; Bridgeport Machine Co.'s No. 15-A Baxter (twin well), SW SE SE Section 32-13-15w, ponds; Stanolind Oil & Gas Co.'s No. 31 Baxter, SW SE Section 32-13-15w, location; Stanolind Oil & Gas Co.'s No. 36 Baxter, SE SW Section 32-13-15w, location; Aylward Drilling Co. and others' No. 1 Sheck, NW NE SW Section 27-13-14w, drilling 400 feet; Buffalo Oil Co.'s No. 2 Schaffer-Anchutz, NE NW SW Section 27-13-14w, cellar; C. Carey's No. 1 Strecker, CNL NE SE SW Section 27-13-14w, cellar; Tom Palmer's No. 4 Keillian, SW NW NW Section 27-13-14w, building rig; Aylward Drilling Co. and others' No. 3 Holland, SE NE NE Section 28-13-14w, rig; Central Petroleum Co.'s No. 1 Ginther, NE NW Section 30-12-15w, rig.

Sedgwick County

Aladdin Petroleum Co. and others' No. 1 Seeley, SE NE Section 17-28-1, Robbins Pool, was dry and abandoned at 3,348 feet. This well had a small show of oil in the Mississippi lime at 3,242-98 feet.

Magnolia Petroleum Co.'s No. 5 W-K-H Trust, SW NE NE Section 19-27-2, Earlsboro Pool, was deepened from 3,259 feet, old total depth, to 3,272 feet, 2 feet in Simpson formation, and was abandoned with a hole full of water.

Sedgwick County's only new operation was Dickey Oil Co.'s No. 2 Brown, SW NW NE Section 20-28-1, location.

Sumner County

E. B. Shawver's No. 2 Frankum, SE NE NE Section 32-31-1w, was completed for 424 bbls. of oil in the Mississippi lime logged at 3,652-90 feet, total depth. It had been acidized.

Trego County

A. D. Morton had driven stake for his No. 1 Jones, SE cor. Section 20-12-23w, Trego County wildcat.

WELDING CONFERENCE

The Texas Technological College, Lubbock, Tex., School of Engineering Department announces that its mechanical engineering department, under Prof. H. F. Godeke, will conduct its first annual welding conference on electric and oxy-acetylene at the college February 14-15.

Invitation is extended to all manufacturers and jobbers of welding equipment to display and demonstrate their products. The displays will be open to the public and it is planned to supplement the display with lectures, motion pictures and demonstrations of various welding operations.

No charges will be made for display space or for admission. Address all inquiries to Prof. H. F. Godeke, Professor of Mechanical Engineering, Texas Technological College, Lubbock, Tex.

W. S. BAGLEY DIES

CALGARY, Alberta, Jan. 12.—William Sidney Bagley, who in 1924 was one of the drillers on the famous Royalite No. 4 gusher in Turner Valley, died in a hospital here, aged 54. A native of Tingwick, Quebec, Mr. Bagley came to Alberta in 1906 and from 1910 to 1924 was a driller for Imperial Oil, Ltd.

Kansas Wildcats

(Continued from Page 62)

Lario O. & G. Co. et al's No. 1 Schreg, NW SE SW Sec. 22-19-4w.
K.C. lime 2,565-2,635 ft.; H.F.W.; drlg. 2,-799 ft.

Stark & Well's No. 1 Smith, NW cor. Sec. 30-19-8w.
Location abd.

Langston et al's No. 1 Markle, NE SW Sec. 1-20-9w.
Show of oil 2,890-2,906 ft.; S.D.

Yingling et al's No. 1 Maupin, NW SW SW Sec. 1-18-8w.
Viola 3,233-39 ft.; pumped 104 bbls. oil, 2 bbls. wtr. in 24 hrs.; acidized and pumped 60 bbls. oil with show wtr.; to deepen.

BOOKS COUNTY

Stearns & Streeter's No. 1 Meyers, NE NW NW Sec. 34-9-16w.
Oswald 3,084 ft.; S.D. 3,088 ft.

RUSH COUNTY

Flynn et al's No. 1 Hartman, SW SE NW Sec. 4-18-16w.
Location.

Lario O. & G. Co. and Phillips Pet. Co.'s No. 1 Benbow, NW NE NE Sec. 12-17-19w.
Drlg. 2,565 ft.

RUSSELL COUNTY

J. Brousk and R. D. Bailey's No. 1 Kluesner, NW SE Sec. 34-15-12w.
Rig.

Blair et al's No. 1 Fink, SW NW SE Sec. 16-14-14w.
Oswald 3,055 ft.; acidized at 3,154 ft. and pumped 320 bbls. oil; 6-in. 3,246 ft.; granite wash 3,318 ft.; T.D. 3,479 ft.; H. F.W.; P.B. to 3,170 ft. and C.O.

Eldorado Ref. Co.'s No. 1 Walz, SE NE NW Sec. 29-13-11w.
Drlg. 1,995 ft.

Darby Pet. Co.'s No. 1 Jarus, NW SW NE Sec. 16-16-12w.
Siliceous 3,348 ft.; T.D. 3,351 ft.; pumped 486 bbls. in 18 hrs.; testing.

Hartman & Blair's No. 1 Krause, NE NW NW Sec. 5-15-15w.
Rig.

Hartman & Blair's No. 1 Sullivan, NE NE SE Sec. 2-14-15w.
15-in. 400 ft.; C.O.

Hartman & Blair's No. 1 Gurney, SE SE NW Sec. 23-14-14w.
12-in. 475 ft.; drlg. 1,640 ft.

Lario O. & G. Co. et al's No. 1 Nuss, NW SW SW Sec. 11-16-14w.
Location.

Lario O. & G. Co. et al's No. 1 Moore, 760 ft. S and 660 ft. E, NW cor. Sec. 34-13-12w.
Rigged up.

Wolf Creek Oil Co.'s No. 1 Donovan, SW SW SE Sec. 10-15-15w.
Drlg. 2,005 ft.

Wolf Creek Oil Co.'s No. 1 Kraft, SW cor. Sec. 26-16-11w.
Rig on ground.

Wolf Creek Oil Co. et al's No. 1 Penn Mutual, SW cor. Sec. 32-15-15w.
Rig.

SALINE COUNTY

Dieter et al's No. 1 Herrington, NE NW SE Sec. 3-13-1w.
8-in. 2,162 ft.; drlg. 2,220 ft.

SCOTT COUNTY

Atlantic Oil Prod. Co.'s No. 1 Vanimsn. C SE NE Sec. 15-20-33w.
6-in. liner 4,650 ft.; pay 4,670-86 ft.; acidized and pump 572 bbls. in 24 hrs.

SEDGWICK COUNTY

Aladdin Pet. Co. et al's No. 1 D. Lauck, SE NE NW Sec. 21-28-2.
Rig.

Allison & Fitzwilliams et al's No. 1 Struthers, NE SW Sec. 34-28-2w.
H.F.W. 3,176-87 ft.; T.D. 3,295 ft.; fishing.

Cameron, Derby Oil Co. and Trees' No. 1 Brainard, SW SE NW Sec. 19-24-2.
Spudded and S.D.

Syndicate O. & G. Co. et al's No. 1 Ratcliff, NE NW NW Sec. 30-26-2.
Viola 3,373-80 ft.; H.F.W.; Wilcox 3,407 ft.; drlg. 3,475 ft.

STAFFORD COUNTY

Atlantic Oil Prod. Co.'s No. 1 Hohner, NW SE SE NE Sec. 31-23-14w.
Drlg. 930 ft.

Atlantic Oil Prod. Co. and Phillips Pet. Co.'s No. 1 Guthrie, C NW NW Sec. 16-25-11w.
10-in. 2,050 ft.; drlg. 2,227 ft.

SUMNER COUNTY

T. Palmer's No. 1 Wentworth, NW NW NE Sec. 9-35-2.
Drlg. 1,975 ft.

TREGO COUNTY

Central Commercial's No. 1 Wagg, NW NW SE Sec. 17-13-21w.
Drlg. 875 ft.

A. D. Morton's No. 1 Jones, SE cor. Sec. 20-12-23w.
Location.

Gulf Coast Wildcats

(Continued from Page 51)

Texas Co.'s No. 2 Dawson, 247 ft. S. 241 ft. W of NE cor. of Lot 58, H.T.&B. Sur. No. 23.
Location.

Texas Co.'s No. 1 L. C. Dawson, 247 ft. S. 441 ft. W of NE cor. of Lot 49, H.T.&B. Sur. No. 23.
Location.

Texas Co.'s No. 2 Dawson, 247 ft. S, 441 ft. W of NE cor. Lot 48, H.T.&B. Sur. No. 23.
Location.

Trumba Oil Co.'s (J. M. Campbell) No. 1 H. McCauley, 150 ft. each way out of NE cor. of W 5 acres of Lot No. 2, A.C. H.&B. Sur. No. 91.
Location.

WEST COLUMBIA—BRAZORIA COUNTY

Sterling O. & R. Co.'s No. 4 Hogg, 200 ft. S of No. 1, 50 ft. from W line of lease, Martin Verner Sur.
Drlg. shale and lime 4,215 ft.; no report.

Texas Co.'s No. 84 Hogg, 2,483 ft. N, 50 ft. W from SE cor. of lease, M. Varner Sur. Temporarily S.D. 5,242 ft.

BARBERS HILL—CHAMBERS COUNTY

Moody Corp.'s No. 1-C E. W. Barber, 302 ft. from N line and 312 ft. from E line of "B" lease, H. Griffith Sur.
Drlg. sandy shale 3,518 ft.

Humble O. & R. Co.'s No. 7-B Kirby, 200 ft. W of No. 6 in Henry Griffith League.
7-in. csg. 5,164 ft.; T.D. 5,197 ft.

Sun Oil Co.'s No. 10 Chambers, 50 ft. from N and W lines of lease.
Drlg. sand and shale 3,896 ft.

Sun Oil Co.'s No. 17 Wilburn fee, 188 ft. E of W line and 40 ft. S of N line and 120 ft. W of No. 16.
S.D. 173 ft.

Sun Oil Co.'s No. 22 J. Wilburn, midway between wells No. 17 and 21, or 150 ft. from each well.
T.D. 4,074 ft.; I.P. 423 bbls. through ¼-in. choke; csg. pressure 350 lbs.; tubing pressure 300 lbs.

Texas Gulf Prod. Co.'s No. 3 T. S. Fitzgerald, 340 ft. S of N line and 60 ft. E of W line of lease.
Drlg. salt 2,114 ft.

Texas Gulf Prod. Co.'s No. 2 Morgan Fitzgerald, 400 ft. N of S line, C of Strip No. 3.
Drlg. salt 2,799 ft.

Texas Co.'s No. 10 Wilburn, 475.8 ft. N, 29 deg., 10 ft. W from SW cor. of lease.
S.D. 2,457 ft.

Texas Gulf Prod. Co.'s No. 3 O. W. Winfree, 505 ft. S of N line and 50 ft. W.
T.D. 6,357 ft.; P.B. 5,680 ft.

Yount Lee Oil Co.'s No. 8 Woodward.
Swabbing oil and S.W. 5,374 ft.

Yount Lee Oil Co.'s No. 27 Chambers Co., 400 ft. W of No. 24 and in line with Nos. 24 and 21.
Drlg. salt 2,814 ft.

Yount Lee Oil Co.'s No. 28 Chambers County, 50 ft. N of S line, direct offset to Sun's No. 10 Chambers County, Wm. Bloodgood Sur.
Derrick.

BOLING—FORT BEND COUNTY

Allied Minerals, Inc.'s No. 1 J. H. Blackwell, 1,400 ft. from E line, 100 ft. from S line of 50-ac. of J. H. Blackwell 100 ac., John Huff Sur.
S.D. for rig repairs 4,495 ft.

Midland Oil Co.'s No. 1 P. F. Coulter, 150 ft. from S line, 4,174 ft. from W line of 100-ac. tract, Miller League No. 2.
Set screen; T.D. 4,186 ft.

Allied Minerals, Inc.'s No. 1 E. C. Farmer, James Scott League, 750 ft. SE of NW line and 150 ft. SW of NE line of Gulf Prod. Co.'s E. C. Farmer 50-ac. tract.
T.D. 5,543 ft.; waiting on pipe.

Irwin Larsen et al's No. 1 J. R. Farmer, 100 ft. NW and 100 ft. SW from E cor. of 125-ac. lease, James Scott Sur.
Location.

Trans-State Oil Co.'s No. 1 Dipple, E flank of dome.
10-in. csg. at 592 ft.

THOMPSON COUNTY

Gulf Prod. Co.'s No. 10 Gubels.
Drlg. shale and lime 3,970 ft.

Humble O. & R. Co.'s No. 22-A Booth.
7-in. csg. 5,190 ft.; T.D. 5,264 ft.

Humble O. & R. Co.'s No. 10 Gubbels.
Set 7-in. csg. 5,303 ft.; T.D. 5,365 ft.; I.P. 54 bbls. per hr. through ⅜-in. choke; tubing pressure 640 lbs.; csg. pressure 625 lbs.

Naylor Oil Co.'s No. 6 Gehr, 340 ft. from S line, 460 ft. from E line of No. 4 Gehr, S. Kennedy Sur.
Drlg. shale 2,010 ft.

Naylor Oil Co.'s No. 7 Gehr, 2,020 ft. from E line, 340 ft. from S line, S. Kennedy Sur.
Drlg. shale 3,327 ft.

ORCHARD—FORT BEND COUNTY

Gulf Prod. Co.'s No. 41 Moore, 3,373 ft. S along W line from NW cor. of James Frazier Sur., and 2,154 ft. at R/A.
Drlg. shale and shells 5,622 ft.

SUGARLAND—FORT BEND COUNTY

Humble O. & R. Co.'s No. 12 Nelson.
10¾-in. csg. 1,154 ft.; T.D. 1,160 ft.

HIGH ISLAND—GALVESTON COUNTY

Yount Lee Oil Co.'s No. 42 Cade, N. Fitzsimmons Sur., half way between Nos. 26 and 28 and 150 ft. E at R/A.
T.D. 6,063 ft.; P.B. to 5,605 ft.

Yount Lee Oil Co.'s No. 44 Cade.
10-in. csg. at 1,273 ft.; T.D. 1,275 ft.

Yount Lee Oil Co.'s No. 23 Smith.
Drlg. shale 2,420 ft.

Yount Lee Oil Co.'s No. 2 Stewart.
Drlg. shale 4,023 ft.

DICKINSON—GALVESTON COUNTY

Humble O. & R. Co.'s No. 1 Schoper, C S½ of Blk. 15, or on line between Lots 3 and 4 and center N and S, W. K. Wilson Sur.
Rig up.

Humble O. & R. Co.'s No. 1 H. O. and W. G. Jones, 750 ft. N of N bank of Bayou and center T and W, J. O. Sherman Sur.
Derrick.

Humble O. & R. Co.'s No. 1 A. F. Danielson, center of 10-ac. tract, being Lots 6 and 7 of Righter Subd., John Sellers Sur.
13⅜-in. at 1,955 ft.; drlg. shale 4,052 ft.

ARRIOLA—HARDIN COUNTY

Houston Oil Co.'s No. 3-X fee, 2,150 ft. S of N line of lease and 150 ft. E of W line of Unit X.
Drlg. broken sand and shale 4,140 ft.

BATSON—HARDIN COUNTY

John Deering's No. 1 Cruse.
T.D. 800 ft.; moving in heavier rig.

SARATOGA—HARDIN COUNTY

Rio Bravo Oil Co.'s No. 9 N. Jordit, 200 ft. due W of No. 9 R. Jordit.
Drlg. 1,297 ft.

SOUR LAKE—HARDIN COUNTY

Arlis Pet. Co.'s No. 1 Harkan and Langham. Dig pits.

Alpha Pet. Co.'s No. 2-A Wm. Weiss, 100 ft. W of No. 2.
Drlg. 6,024 ft.

Sun Oil Co.'s No. 2 Bernard Corp., 150 ft. from N and W lines of Lot 11, H.T.&B. Sur., Sec. 69.
Coring shale 7,514 ft.

GOOSE CREEK—HARRIS COUNTY

Derring's No. 1 Williams, 180 ft. from SE cor. and 55 ft. NE of Hybush's No. 3, in W. Scott upper league.
Cellar.

Humble O. & R. Co.'s No. 30 Simms-Smith, Scott Lower League, 1,000 ft. E of the most westerly W line, and 300 ft. N of the most northerly S line.
T.D. 6,855 ft.; circulating and reaming.

PIERCE JUNCTION—HARRIS COUNTY

Gulf Prod. Co.'s No. 1 Taylor.
Drlg. shale 5,082 ft.

Rio Bravo Oil Co.'s No. 27-A Settegast, 377 ft. S, 553 ft. W of NE cor. of Settegast "A" tract, James Hamilton Sur.
Drlg. shale and shells.

Rio Bravo Oil Corp.'s No. 9-A Settegast, 1,575 ft. N line, 350 ft. E line NE cor. "A" lease, J. A. Kopman Sur.
T.D. 5,411 ft.; rig up to pump.

MYKAWA—HARRIS COUNTY

Danciger O. & R. Co.'s No. 1 Williams, SW cor. of 29-ac. lease.
7-in. csg. 4,870 ft.; T.D. 4,890 ft.

West Prod. Co.'s No. 1 Lobit, C of Lot 17, Erin Gardens Subd., F. J. Rothas Sur
Abd. in shale 6,600 ft.

TOMBALL—HARRIS COUNTY

Humble O. & R. Co.'s No. 2 Zebhart, 466 ft. E of W line, 900 ft. S of N line of survey.
10¾-in. csg. at 935 ft.; T.D. 961 ft.

Humble O. & R. Co.'s No. 6-B Quilter, 466 ft. W of E line of "B" tract, 1,090 ft. N of S line, A. Sanchal Sur.
10¾-in csg. at 940 ft.; T.D. 955 ft.

Humble O. & R. Co.'s No. 1 Mueller.
7-in. csg. 5,550 ft.; T.D. 5,554 ft.

Humble O. & R. Co.'s No. 3-A Martens.
10¾-in. csg. 924 ft.; coring sandy shale 5,400 ft.

Humble O. & R. Co.'s No. 1 Melo, 525 ft. S of N line, 584 ft. E of W line of 246 acres, C. N. Pillot Sur.
10¾-in. csg. 940 ft.; drlg. 3,544 ft.

KITTRELL—HOUSTON AND WALKER COUNTIES

Humble O. & R. Co.'s No. 4 Shaw, 990 ft. NW from SE line, 990 ft. SW of NE line of C. McEllis Sur.
T.D. 2,022 ft.; I.P. 142 bbls. per day through ½-in. choke; tubing pressure 80 lbs.; csg. pressure 800 lbs.

Humble O. & R. Co.'s No. 5 Shaw, 990 ft. N and 330 ft. E of SW cor. of the Shaw 100-ac. tract in Charles McEllis Sur.
Rig up.

W. A. Kells' No. 1 L. W. Huffman, center of Huffman tract, C. McEllis Sur.
Location.

VANDERBILT—JACKSON COUNTY

Imperator Oil Co.'s No. 1 Dutton, S C of Lot No. 11, Blk. 25, 450 ft. S of R.R. and 1,350 ft. W line of townsite, Ray Musquiz Sur.
Rigged up and S.D.

Turman Oil Co.'s No. 1 T. H. Miller, 150 ft. each way out of E 50 ac. of Miller 100-ac. tract in Ray Musquiz Sur.
Rigging up.

BIG HILL—JEFFERSON COUNTY

Yount Lee Oil Co.'s No. 1-A Pipkin, 2,640 ft. S and 2,050 ft. W of NE cor. of survey.
Drlg. shale and lime 5,659 ft.

FANNETT—JEFFERSON COUNTY

Gulf Prod. Co.'s No. 4 Junker, 150 ft. S of N line, 150 ft. W of E line, Tug Junker 260-ac. tract, Wm. Smith League.
Drlg. lime rock 2,772 ft.

CLEVELAND—LIBERTY COUNTY

Blackgold Pet. Co.'s No. 1 R. D. McDonald, 30 ft. due W of Gulf Prod. Co.'s 6-C Kirby, T. Devers Sur.
10¾-in. csg. at 988 ft.; drlg. sandy shale 4,523 ft.

William J. Colegrove et al's No. 1 State School Land & Dev. Co., 446 ft. from W line and 170 ft. from S line of survey, Clayton Rooper Sur.
Location.

Gulf Prod. Co.'s No. 3-E Kirby, 933 ft. due E of No. 1 Kirby.
Derrick.

ESPERSON—LIBERTY COUNTY

General Crude Oil Co.'s No. 15 Moores Bluff, midway between No. 10 and No. 12 Moores Bluff.
T.D. 3,097 ft.; P.B. to 2,900 ft.

General Crude Oil Co.'s No. 9 Davis, 1,300 ft. each way from S and E lines of lease in D. Kokernut Sur.
T.D. 5,872 ft.; pulling screen.

General Crude Oil Co.'s No. 1 W. D. Kay, Malcolm Duncan Sur., 1,537 ft. along N Reaming 5,928 ft.

HANKAMER—LIBERTY COUNTY

Gulf Prod. Co.'s No. 1 Boyette, offset to No. 1 Exxel.
Drlg. sand 2,597 ft.; show of oil.

HULL—LIBERTY COUNTY

Gulf Prod. Co.'s No. 12 W. L. Thomas, 1,-650 ft. N and 150 ft. E of SE cor. of 300-ac. tract, Jessie Devore Sur.
Drlg. sticky shale 5,890 ft.

G. R. Brown and S. F. Bashara's No. 1 David Hannah, Jesse Devore league, 200 ft. S line, 150 ft. E line, 42-ac. Gulf tract.
Derrick.

Sterling O. & R. Co.'s No. 1 Taylor, 150 ft. S of S line of tract, and 5,500 ft. E of E line of 5-ac. tract, J. Devore Sur.
Drlg. shale 3,331 ft.

Texas Co.'s No. 3 Barrow.
Drlg. shale 4,607 ft.

BUCKEYE—MATAGORDA COUNTY

United North & South Dev. Co.'s No. 1 Unit 4, Buckeye farm, J. C. Keller league, 214 ft. N line and 202 ft. E line of lease.
Shut down.

CONROE—MONTGOMERY COUNTY

Humble O. & R. Co.'s No. 73 South Tex. Dev. Co., 6,000 ft. E of most easterly W line, 466 ft. S of N line of Theo Slade Sur.
Drlg. shale and boulders 592 ft.

Humble O. & R. Co.'s No. 72 South Texas Development Co., 949 ft. W of E line, 700 ft. S of N line, T. C. Howell Sur.
7-in. csg. 5,161 ft.; T.D. 5,181 ft.; I.P. 48 bbls. per hr.; ½-in. choke; tubing pressure 375 lbs.; csg. pressure 460 lbs.

Houston Oil Co.'s No. 11 Cartwright, N offset to No. 10 Cartwright.
Location.

SPLENDORA—MONTGOMERY COUNTY

A. A. Franklin, tr.'s No. 1 Cora Neff, 4,000 ft. W of E line and 466 ft. S of N line of Neff 1,000-ac. tract, Walker County School Land Sur.
Drlg. shale 3,025 ft.

Bryce McCandless et al's No. 1 Texas Long Leaf Lbr. Co., 330 ft. from N and E lines of the W½ of Blk. No. 8, Walker County School Land Sur.
Derrick.

ORANGE—ORANGE COUNTY

Trio Oil Co.'s No. 1 D. S. Comier, 69 ft. W of E line and 39 ft. S of N line of 6.83-ac. tract in W. M. Dyson Sur.
S.D. 1,792 ft.

PORT NECHES—ORANGE COUNTY

Port Neches Pet. Corp. et al's No. 1 W. B. Organ, 450 ft. from NE line and 150 ft. from NW line of A. Schramm Sur., S of Port Neches Field.
Rig up.

Texas Co.'s No. 3-B Polk, 200 ft. S, 450 ft. W of SE cor. of Mary E. Hall Sur. No. 1.
Drlg. shale, lime and pyrite 4,723 ft.

Texas Co.'s No. 10 Kuhn, 200 ft. N, 450 ft. W of SE cor. of Mary E. Hall Sur. No. 1.
9⅝-in. csg. 5,443 ft.; drlg. shale 5,850 ft.

Texas Co.'s No. 6 Kuhn, 150 ft. E, 150 ft. N of SE cor. of Mary Hall Sur.
7-in. csg. 5,399 ft.; T.D. 5,939 ft.

LIVINGSTON—POLK COUNTY

Gem Oil Co.'s No. 1 Watt, 330 ft. N of S line, 330 ft. W of E line of lease, A. Viesca Sur.
Moving in rig.

Gem Oil Co.'s No. 6 Davis & Holmes, 663 ft. from W and 662 ft. from N line of survey, A. Viesca Sur.
Location.
Drlg. shale and shells 3,375 ft.

T. D. Humphries' No. 1 J. C. Whitforth, Derrick.

Ownby Drlg. Co.'s No. 1 H. J. Pratt, 200 ft. N and E of H. J. Pratt's 2,203-ac. tract, A. Viesca Sur.
Clearing location.

Sun Oil Co.'s No. 2 H. J. Pratt, 330 ft. from N and E lines of Pratt 195-acre lease, A. Viesca Sur.
T.D. 4,242 ft.; I.P. 240 bbls. per day on ¼-in. choke; csg. pressure 500 lbs.; tubing pressure 250 lbs.

B. M. York's No. 2 Kingsbury County Holding Corp., Tract 19, A. Viesca Sur., 150 ft. N of No. 1.
T.D. 4,234 ft.; swabbing.

GRETA—REFUGIO COUNTY

Atlantic and Stanolind's No. 7-G O'Brien.
Derrick.

Hewitt & Daugherty's No. 12 Lambert.
Rig up.

Humble O. & R. Co.'s No. 17 Heard.
T.D. 4,392 ft.; 7-in. csg. 4,379 ft.

REFUGIO—REFUGIO COUNTY

Houston Oil Co.'s No. 15 P. H. Rooke, 486 ft. SW of NE line, and 352 ft. W of E line.
Drlg. 3,525 ft.

Houston Oil Co.'s No. 18 W. J. J. Heard, S offset to United Prod. Co.'s well on N side of river.
Drlg. shale 6,159 ft.

United Gas Co.'s No. 4 Wilson Heard
Mudded well 3,444 ft.

United Prod. Co.'s No. 9 Wilson Heard. 2,414 ft. SE along NE property line of Wilson Heard 350-ac. tract, thence at R/A 300 ft. to point of location.
T.D. 4,937 ft.; I.P. 200 bbls. per day; ¼-in. choke; 750 lbs. csg. pressure; 400 lbs. tubing pressure.

United Gas Co.'s No. 10 Wilson Heard, runs 2,062 ft. along NE line Wilson Heard lease from S cor. of Houston Oil Co.'s F. V. W. Heard lease, 4,579 ft. to a point, thence at R/A to line 330 ft. to point of location.
Derrick.

United Prod. Co.'s No. 2 Powers (old well).
T.D. 5,410 ft.; jetted well 5,205 ft.; trace of oil.

COLETO CREEK—VICTORIA COUNTY

Rupert Cox's No. 1 Antone Trybil, R. Manchola Sur.
Derrick.

Albert Plummer's No. 1 Zimmer, 330 ft. NE and SE lines of lease in Manchola Sur.
S.D. 5,200 ft.

Plummer Oil Co.'s No. 2 Zimmer, 660 ft. NE of No. 2.
Drlg. 1,200 ft.

McFADDIN-O'CONNOR DISTRICTS—VICTORIA AND REFUGIO COUNTIES

Texas Co.'s No. 9 McFaddin.
Location.

SAN FELIPE—WALLER COUNTY

Seaport Oil Co.'s No. 1 J. W. Avery, 330 ft. from E line, 330 ft. from N line of NE cor. of 29-ac. tract, John McFarland Sur.
Abd. 2,996 ft.

Texas Co.'s No. 1 J. H. Jones, 330 ft. each way from N line and NW lines of lease, Wm. Cooper Sur.
Drlg. sticky shale 4,107 ft.

CLAY CREEK—WASHINGTON COUNTY

Sun Oil Co.'s No. 10 H. R. Clay.
Drlg. clay 1,239 ft.

LOUISE—WHARTON COUNTY

Pure Oil Co.'s No. 3 Charles T. Kountze, 1,980 ft. SE and 330 ft. SW of N cor. of Morris & Cumming Sur., Sec. 9.
Drlg. shale 6,135 ft.

Pure Oil Co.'s No. 1 John Macha, 313 ft. from NW line and from SE line of F. Walnut Sur., and 467 ft. from NE line

of 101.53-ac. lease, M.&C. Sur. No. 25. Location.
Pure Oil Co.'s No. 1 G. Wharton Est., 1,497 ft. from SW line and 313 ft. from SE line of F. Walnut Sur., Abst. A-35. Drlg. shale and lime 5,489 ft.
Pure Oil Co.'s No. 2 Stewart, Morris & Cummings Sur., Sec. 25, 990 ft. out of SW cor. of 160 acres. T.D. 8,371 ft.; milling out of csg. at 5,865 ft.

BAY ST. ELANE—TERREBONNE PARISH

Texas Co.'s No. 9 Bay St. Elane. Drlg. shale 5,151 ft.

CALLIOU ISLAND—TERREBONNE PARISH

Texas Co.'s No. 15 Calliou Island, Sec. 20-23-23. Drlg. salt 3,911 ft.
Texas Co.'s No. 17 Calliou Island, Sec. 20-23-23. Derrick.
Texas Co.'s No. 18 Calliou Island. Location.

SOUTH LOUISIANA FIELDS

BLACK BAYOU—CAMERON PARISH

Shell Pet. Corp.'s No. 2 State. T.D. 1,674 ft.; set whipstock.
Shell Pet. Corp.'s No. 1 A. Watkins, 970 ft. S, 1,990 ft. E of NW cor. of Sec. 17-12s-12w. Drlg. shale 105 ft.
Shell Pet. Corp.'s No. 3 State. T.D. 6,905 ft.; washing to bottom.

BOSCO—ACADIA AND ST. LANDRY PARISHES

Superior Oil Prod. Co.'s No. 4 Hermandez, 450 ft. E and 330 ft. S of NW cor. of lease, Sec. 34-8s-3e. Derrick.
Superior Oil Prod. Co.'s No. 7 Larcade, 2,467 ft. E, 190 ft. N of SW cor. N½ NW Sec. 35-8s-3e. Location.
Superior Oil Prod. Co.'s No. 1 E. Comeaux ("A" lease), 330 ft. S, 89 deg. 3 min. E, and 350 ft. S, 30 deg. 21 min. W, of SW cor. N½ NE Sec. 35-8s-3e. Drlg. shale and sand 8,114 ft.
Superior Oil Prod. Co.'s No. 3 Comeaux, 1,324 ft. E of NW cor. NE Sec. 34. Drlg. shale 7,702 ft.
Superior Oil Prod. Co.'s No. 5 Larcade, 1,665 ft. S and 483 ft. E of NW cor. Sec. 35-8s-3e. Rig up.
Superior Oil Prod. Co.'s No. 1 B. Iseringhauser, 330 ft. S and 2,546 ft. W of SE cor. Sec. 27-8s-3e. Drlg. shale and sand 7,816 ft.
Superior Oil Prod. Co.'s No. 1 Prejan, 334 ft. N, 330 ft. E of SW cor. NE Sec. 34. 7-in. csg. 8,560 ft.; T.D. 8,585 ft.
Superior Oil Prod. Co.'s No. 1 Moise LaVergne, 269.7 ft. W and 98 ft. N of SE cor. of Sec. 28-8s-3e. T.D. 8,123 ft.; P.B. 6,268 ft.
Superior Oil Prod. Co.'s No. 1 Trahan, 1,392 ft. N, 543 ft. W of SE cor. Sec. 27. 7-in. liner 7,825 ft.; T.D. 7,832 ft.
Superior Oil Co.'s No. 1 A. Martinez, 2,510.6 ft. S and 1,057.2 ft. W of NE cor. of Sec. 35-8s-3e. Abd. 10,005 ft.
Superior Oil Prod. Co.'s No. 1 A. Allemond, 350 ft. S, 20 deg. S, 53 min. W, and 530 ft. N, 88 deg., 58 min. W of NE cor. of 37.13-ac. tract, Sec. 33-8s-3e. Fishing 1,275 ft.
Superior Oil Prod. Co.'s No. 1 M. Kahn, from SE cor. 2,563 N, 20 deg., 53 min. E, and 1,000 ft. N, 89 deg., 23 min. W of Sec. 33-8s-3e. Fishing 6,793 ft.

EDGERLY—CALCASIEU PARISH

Emerson Oil Co.'s No. 1 Paraffine Oil Co., 945 ft. N and 50 ft. E of SW cor. NE NE Sec. 28-9s-11w. S.D. 4,152 ft.
Union Sulphur Oil Co.'s No. 3 Hunter, 1,160 ft. N and 220 ft. E of SW cor. SE Sec. 21-9s-11w. D.S. stuck 3,453 ft.

VINTON—CALCASIEU PARISH

W. S. Green's No. 7 Green. Abd. 1,856 ft.
Vinton Pet. Co.'s No. 9 Gray. T.D. 3,495 ft.; I.P. 40 bbls. daily.

CAMERON MEADOWS—CAMERON PAR.

Burton-Sutton's No. 1 School Land. Drlg. sandy shale 3,914 ft.
Burton-Sutton Oil Co.'s No. 4 School Land, 2,391 ft. W and 150 ft. N of SE cor. of Sec. 16-4s13w. Derrick.
Magnolia Pet. Co.'s No. 9 Cameron Meadows, 2,266 ft. N and 526 ft. S of NE cor. Sec. 21-14s-13w. Drlg. shale 3,608 ft.
Texas Co.'s No. 1 Miami Corp. T.D. 8,651 ft.; reaming 8,142 ft.

CHOCTAW DOME—IBERVILLE PARISH

Standard Oil Co.'s No. 5 Gay, 2,450 ft. S and 425 ft. E of NW cor. of NE Sec. 32-9s-11e. Drlg. shale 42 ft.

DOG LAKE—TERREBONNE PARISH

Texas Co.'s No. 11 State, 150 ft. N and 2,474 ft. W, SE cor. Sec. 31-21s-16e. Derrick.

GARDEN ISLAND BAY—TERREBONNE PARISH

Texas Co.'s No. 13 State, 2,391 ft. S and 1,504 ft. W of NE cor. Sec. 107-23-32. Rig up.
Texas Co.'s No. 14 State, 667 ft. N and 992 ft. E of SW cor. Sec. 37-23-32. Drlg. shale 1,143 ft.

GUEYDAN—VERMILLION PARISH

Pure Oil Co.'s No. 6, Alliance Trust, 667 ft. E, 1,787 ft. S line of lease, Sec. 24-11s-1w. T.D. 9,379 ft.; drlg. in sidetracked hole at 5,865 ft.

HACKBERRY—CAMERON PARISH

Calcasieu Oil Co.'s No. 3 H. C. Hanzen, 150 ft. S and 150 ft. E of NW cor. of lease. Sec. 13-12s-10w. Drlg. lime 5,242 ft.
Sutton Oil Co.'s No. 1 Miller, 239 ft. N and 100 ft. E of SW Sec. 23-12s-10w. S.D. 3,265 ft.
Texas Co.'s No. 13-B State, 400 ft. N of NE cor. of lease, Sec. 13-12s-10w. T.D. 6,947 ft.; 7⅝-in. csg. 6,923 ft.; I.P. 1,150 bbls. per day through ¼-in. choke.
Texas Co.'s No. 14 State, 500 ft. SE of No. 13, Sec. 13-12s-10w. Location.
Union Sulphur Co.'s No. 3 Hanzen. Drlg. shale and lime 5,711 ft.
Union Sulphur Co.'s No. 4 Hackberry. Drlg. sand and gravel.
Yount Lee Oil Co.'s No. 1-A Gulf Land, 3,000 ft. S and 50 ft. E of the NW cor of Sec. 22-12-10. Rig up.
Yount Lee Oil Co.'s No. 12 Gulf Land, 1,625 ft. S and 350 ft. W of NE cor. of NW of Sec. 14-12s-10w. Drlg. shale 2,655 ft.

NEW IBERIA—IBERIA PARISH

Harrison & Abercrombie's No. 3 Schwing, 500 ft. N and 50 ft. E of No. 2, Sec. 24-12s-5w. Rig up.
Texas Co.'s No. 1 Hanzen, NE along NW line of lease 508 ft., thence 150 ft. E at R/A, Sec. 54-12s-7e. Drlg. shale 3,465 ft.

IOWA—CALCASIEU AND JEFF DAVIS

Magnolia Pet. Co.'s No. 11 Walt, 330 ft. E, 330 ft. N of SW cor. NE SE Sec. 12. Drlg. shale 6,703 ft.
Shell Pet. Corp.'s No. 12 Hyde, 330 ft. W, 330 ft. S of NE cor. NW Sec. 13-9s-7w. T.D. 6,959 ft.; I.P. 641 bbls.; 17/64-in. choke; tubing pressure 900 lbs.; csg. pressure 1,100 lbs.
Shell Pet. Corp.'s No. 2 Tuten, 1,159 ft. W and 330 ft. from S of NE cor. SE Sec. 13-9s-6w T.D. 6,648 ft.; I.P. 1,280 bbls.; 23/64-in. choke; tubing pressure 875 lbs.; csg. pressure 800 lbs.
Shell Pet. Corp.'s No. 13 Hyde, 990 ft. S, 330 ft. E of NW cor. NE Sec. 13-9s-7w. Rig up.

JENNINGS—ACADIA PARISH

Simon-Tolson and Gardner's No. 1, 1,020 ft. due E and 250 ft. due W of SE cor. Sec. 46-9s-2w. Drlg. sand 1,785 ft.
Yount Lee Oil Co.'s No. 14 Housierre-Latrielle, 260 ft. N of No. 13, Sec. 47-9s-2w. 7-in. csg. 7,383 ft.; drlg. 7,535 ft.

LAKE BARRE—TERREBONNE PARISH

Texas Co.'s No. 12 L.L.&E. Shale 3,270 ft.
Texas Co.'s No. 13 Lake Barre. Drlg. shale 3,853 ft.
Texas Co.'s No. 29 Lake Barre. Drlg. sand and shale 3,771 ft.
Texas Co.'s No. 30 Lake Barre. T.D. 4,073 ft.; P.B. to 3,096 ft.; whipstocking at 3,156 ft.
Texas Co.'s No. 31 Lake Barre. Location.

LAKE HERMITAGE—PLAQUEMINES PARISH

Humble O. & R. Co.'s No. 2 LaFourche, Basin Levee Dist. Abd. 4,141 ft.

LAKE PELTO—TERREBONNE PARISH

Texas Co.'s No. 12 Lake Pelto. Drlg. sand 4,532 ft.
Humble O. & R. Co.'s No. 3 Devilbiss, 1,399
Whitstone O. & G. Co.'s No. 1 Buckley, 200 ft. S and E of NW cor. SW SW Sec. 35-19s-16e. T.D. 3,390 ft.; P.B. to 3,053 ft.

LAKE WASHINGTON—PLAQUEMINES PARISH

Humble O. & R. Co.'s No. 23 Cockrell-Moran, 650 ft. N and 21 deg. 30 min. E of No. 3 in Twp. 20s-26e. T.D. 4,355 ft.; washing well.

LEESVILLE—LAFOURCHE PARISH

Gulf Prod. Co.'s No. 5 Allen. Drlg. gumbo 2,600 ft.
Gulf Prod. Co.'s No. 10 Bernard, 1,833 ft. E, 958 ft. S of NW cor. Sec. 26-21s-22e. Derrick.
Emerald Pet. Co.'s No. 10 State, west bank, 300 ft. S of well No. 1. Location.
Emerald Pet. Co.'s No. 11 State, east bank, 327 ft. N of well No. 1. Location.
Emerald Pet. Co.'s No. 12 State, east bank, 350 ft. S of well No. 1. Location.
Leesville Oil & Gas Co.'s No. 1 Southern Louisiana Canal Navigation Co., 35 ft. W of Bank of Bayou, 15 ft. N of S bank, Sec. 26-21s-22e. Washing to bottom 4,001 ft.
Lincoln Oil Co.'s No. 5 State. Location.
Lincoln Oil Co.'s No. 6 Viser. Drlg. shale 3,270 ft.
Texas Co.'s No. 21 Leesville. T.D. 4,160 ft.; P.B. to 1,353 ft.
Texas Co.'s No. 23 Leesville. Rig up.
Texas Co.'s No. 27 Leesville. Canal completed.
Texas Co.'s No. 30 Leesville, 1,075 ft. S, 310 ft. E, NW cor. Lot 6, Sec. 26-21s-22w. Ready for rig.

LOCKPORT—CALCASIEU PARISH

Magnolia Pet. Co.'s No. 12 Bordages, 966 ft. W and 93 ft. N of SE cor. N½ NE Sec. 8-10s-19w. Drlg. shale 7,361 ft.
Union Sulphur Co.'s No. 1 Moss (W.O.). Drlg. sandy shale 6,451 ft.

PORT BARRE—ST. LANDRY PARISH

Gulf Prod. Co.'s No. 9 Wilson Cochran, Sec. 26s-22e-1e. T.D. 3,206 ft.; I.P. 1,500 bbls. per day; 7/16-in. choke; tubing pressure 275 lbs.

ROANOKE—JEFFERSON DAVIS PARISH

Humble O. & R. Co.'s No. 3 Kratzer, 440 ft. from W line, 440 ft. from S line of 120-ac. tract, Sec. 11-4w-9s. 16-in. csg. 48 ft.; drlg. sand and gravel 622 ft.
Humble O. & R. Co.'s No. 1 Clayton, 2,650 ft. S and 440 ft. W, NE cor. Sec. 10-9s-4w. Rig up.
Humble O. & R. Co.'s No. 1 R. C. Jarnegan, 440 ft. S, 440 ft. E of the NW cor. SE Sec. 12-9s-4w. Drlg. shale 8,807 ft.; (corrected).
Humble O. & R. Co.'s No. 3 Devilbiss, 1,399 ft. W, 466 ft. S of NE cor. Sec. 14-9s-4w. 7-in. csg. 9,310 ft.; T.D. 9,425 ft.
Shell Pet. Corp.'s No. 1 Jarnigan, 330 ft. E, 660 ft. S. NW cor. Sec. 12-9s-4w. Drlg. shale 8,811 ft.
Shell Pet. Corp.'s No. 1 Carter, 660 ft. N and 330 ft. W of SE cor. NW Sec. 1-9s-4w. Drlg. sandy shale 6,324 ft.
Shell Pet. Corp.'s No. 2 Kratzer, 440 ft. N and 440 ft. E of SW cor. NW Sec. 12-9s-4w. Drlg. shale 5,582 ft.

SORRENTO—ASCENSION PARISH

Union Sulphur Co.'s No. 26 United Land. Abd. 5,921 ft. in salt.

SULPHUR—CALCASIEU PARISH

Union Sulphur Co.'s No. 2 Noble, E of No. 1. Drlg. wtr. sand 4,152 ft.
Union Sulphur Co.'s No. 790 fee, 929 ft. S and 802 ft. W of C Sec. 29-9s-10w. Drlg. shale 5,518 ft.
Union Sulphur Co.'s No. 2 Ulrich, 500 ft. N of No. 1. Drlg. shale 6,171 ft.

VINTON—CALCASIEU PARISH

W. S. Green's No. 7 Green. Abd. 1,856 ft.
Vinton Pet. Co.'s No. 9 Gray. T.D. 3,490 ft.; I.P. 40 bbls. per day.
Wilson Broach's No. 9 Wilson. Drlg. sand 3,500 ft.

WHITE CASTLE—IBERVILLE PARISH

Shell Pet. Corp.'s No. 1 White Castle Shingle Co., 1,830 ft. W, 100 ft. S from NE cor. of lease. Cmtd. surface csg.
Shell Pet. Corp.'s No. 9 Wilburn, 300 ft. E of No. 7. Coring sandy shale 6,464 ft.

MISCELLANEOUS WILDCATS

TEXAS

BRAZORIA COUNTY

Amerada Pet. Corp.'s No. 1 Houston Farm Dev. Co., 1,414 ft. N, 316 ft. W of SE cor. of L. Bachelder Sur. T.D. 7,667 ft.; P.B. to 6,650 ft.
Big Creek Oil Co.'s (C. & R. G. Drlg. Co.) No. 2 Truska, 991 ft. W of No. 1, H.T.&B. Sur., Sec. 7. S.D. 925 ft.
Holt et al's No. 1 Griffith, J. B. Bailey Sur. T.D. 4,200 ft.; waiting orders.
Luling O. & G. Co.'s No. 1 Jameson, 600 ft. W of E line, 750 ft. S of N line of N. E. Roberts Sur. Location.
Showers & Moncrief's No. 1 Hughey, 5,500 ft. NW of discovery well, in center of Lot 18, H.T.&B. Sur., Sec. 29, Abst. 292. Location.

CALHOUN COUNTY

Continental Oil Co.'s No. 1 American Nat. Realty Co., C of NE of Sec. 6, Blk. C. Preparing to work over.

CHAMBERS COUNTY

Humble O. & R. Co.'s No. 1 Middleton, 466 ft. each way out of the SW cor. of survey, 13⅜-in. csg. at 2,319 ft.; T.D. 4,302 ft.; P.B. to 3,750 ft.
Sun Oil Co.'s No. 1 Hamilton, 1,400 ft. from N line, 1,400 ft. from W line of survey, T.&N.O. Sur., Sec. 128. Drlg. shale 7,073 ft.

COLORADO COUNTY

Danciger O. & R. Co. and L. E. Hultz's No. 1 C. L. Raver, 990 ft. N and E of SW cor. 477 acres, Sec. 1, B.B.B.&C. Sur. Drlg. 4,686 ft.

FORT BEND COUNTY

Benedum & Trees' No. 1 Jacob Hensler, Charles D. Sayers Sur. Abd. 6,500 ft.
W. A. Shafer et al's No. 1 V. B. Bortash, 693 ft. SW of NE line and 1,003 ft. NW of SE line of Sec. 52, H.&T.C. Sur. S.D. 2,900 ft.

GALVESTON COUNTY

Gillock Pet. Co.'s No. 2 Maco Stewart, 900 ft. N and 150 ft. W of No. 1, Alex Farmer Sur. T.D. 1,500 ft.; waiting on surface pipe; S.D.
Texana Gulf Oil Corp.'s No. 1 Thomas Shaw (200 acres), 150 ft. NW line, 165 ft. NE line, Lot 66, Sec. 7, Hall & Jones, Galveston Island. Drlg. shale 5,117 ft.

GRIMES COUNTY

Hubert Holt et al's No. 1 Simon Fuqua, 1,200 ft. N of S line and 400 ft. W of E line of 177-ac. lease and survey, Moses Evans Sur. S.D. 3,030 ft.
Dr. Marshall et al's No. 1-B Todd, 300 ft. from E line and 175 ft. from N line of 150-ac. tract in extreme NW cor. of county (25 ft. N of No. 1). S.D. 2,005 ft.
Roan et al's No. 1 S. W. Sealy, 3,474 ft. N of S line and 850 ft. E of W line of survey, B. F. Smith Sur., 2 miles SW of Kellum Springs. S.D. 2,650 ft.

HARRIS COUNTY

American Liberty Oil Co.'s No. 1 M. M. Graves, 1,402 ft. N of S line and 467 ft. E of W line of J. W. Bryan Sur. Reaming shale 6,395 ft.; top Cockfield at 6,240 ft.
Cockburn Oil Co.'s No. 1 Brooks, 7,400 ft. SW of NE cor. of Robert and Richard Vinee Sur. Rig up.
Esco Oil Co.'s No. 1 E. P. Seureau, 2,223 ft. from W line and 2,215 ft. from S line of 350-ac. tract, W. P. Harris Sur., Abst. A-26. Drlg. shale 4,530 ft.
Goldston et al's No. 1 Weingarten, 467 ft. out of NE cor. of H.&T.C. Sur., Sec. 39. Drlg. shale 2,735 ft.
T. S. F. Oil Co.'s No. 1 J. B. Hine, Arthur McCormick Sur., Abst. 46. Drlg. shale and lime 3,497 ft.
C. C. Foster et al's No. 1 H. K. Johnson, 2,000 ft. from S line and C of E and W lines of G.C.&S.F. Sur. Drilled 25 ft. and S.D.
Means and McGehee, Inc.'s No. 1 Laura Lackner, 9,357 ft. W and 2,803 ft. N, of H. Rinerman Sur. Moving in rig.
W. U. Paul's No. 1 E. M. House, 2,200 ft. N and 1,000 ft. E of NE cor. of E. Benson Sur. in M. Magruder Sur. Trying to sidetrack 7,320 ft.

JACKSON COUNTY

A. M. Harris' No. 1 Whitley, 800 ft. out of SE cor. of F. G. Keller Sur. Location.

JEFFERSON COUNTY

Sun Oil Co.'s No. 1 H. Long, 1,500 ft. E line, 990 ft. E line of lease. Drlg. shale 9,045 ft.
Sun Oil Co.'s No. 1 Hebert & Braussard, 4,890 ft. NW along SW line and 660 ft. NE at right angles to SW line, B. Blackman Sur., Abst. No. 2. Rig up.

LAVACA COUNTY

L. A. Douglas' No. 1 Matt Pustka, 330 ft. S and W lines of 139-ac. tract in Moses Mitchell Sur. Abd. 3,003 ft.
Humble O. & R. Co.'s No. 1 C. S. Wilson, 330 ft. out of SW cor. of Crenshaw Sur. Drlg. shale 6,856 ft.

LIBERTY COUNTY

R. M. Bruner et al's No. 1 N. Bell, 150 ft. from N line and 150 ft. from W line of Bell's 187-ac. tract, H.&T.B. Sur. No. 4. Rigging up.
Extension Oil Co.'s No. 1 J. A. Lovett, 330 ft. from E and 600 ft. from S line of lease, P. P. Deevers Sur. Drlg. shale 4,007 ft.
Liberty-Independent Oil Co.'s No. 1 J. M. Neal, 2,550 varas from E line and 500 varas from N line of Samuel Strong Sur. Drlg. shale 3,410 ft.
A. L. Maxwell's No. 1 M. P. Hinchliff, 200 ft. from E line and 1,000 ft. from the N line of survey, H.&T.C. Sur., Sec. 10s. Derrick.
Thomas et al's No. 1-A Eicke, 660 ft. from W line and 2,350 ft. from S line of tract in Green Sur. T.D. 5,047 ft.; 4½-in. csg. at 5,029 ft.

MADISON COUNTY

Texas-New York et al's No. 1, 3,000 ft. E and 1,750 ft. S of NW cor. of J. H. Pearson Sur. Drlg. shale 825 ft.

MATAGORDA COUNTY

Cockburn Oil Co.'s No. 6 Hawkins, 2,600 ft. from NW line, 1,200 ft. from SW line of McCarthy Sur. Drlg. lime rock 3,673 ft.
Dr. Griffith's No. 1 fee, 3,000 ft. from E line and 3,000 ft. from W line of Wm. H. Bell Sur. Rigging up and S.D.
Horace M. Smith, Inc.'s No. 1 Wadsworth ranch, 150 ft. out of S cor. of Lot No. 3, Blk. S, R. Fisher Sur. Drlg. 1,400 ft.

MONTGOMERY COUNTY

Reynolds Drlg. Co. et al's No. 1 Mrs. Clara B. Stewart, 330 ft. S and E of most easterly inner cor. of 595-ac. tract, John Corner Sur. Drlg. shale 5,169 ft.
Walter Keeble's No. 1 Foster, 700 ft. E of W line, 2,000 ft. N of S line, Lot 27. Spudded.
Woodard-Smith-Cooper's No. 1 J. V. Scott, F. A. B. Wheeler Sur. Set 10¾-in. csg. 207 ft.; drlg. 2,054 ft.

ORANGE COUNTY

Blue Line Oil Co.'s No. 1 Godwin, Richard Ballew Sur., 300 ft. from E line and 150 ft. from NE line of Godwin 20-ac. tract. S.D. 2,770 ft.

POLK COUNTY

C. & C. Drlg. Co.'s No. 1 Granbury & Smith, 600 ft. N and 600 ft. W from most western NW cor. of Gulf Prod. Co.'s Graybury & Smith lease, in the Wm. Shadburn Sur. Derrick.
Howard Dailey et al's No. 1 Z. B. Knox, 1,450 ft. W and 1,920 ft. S of NE cor. of F. Chairs Sur., 16 miles NE of Corrigan. S.D. 60 ft.
J. F. Anderson's No. 1 E. L. Duke (O.W.D. D.), 400 ft. from E and 350 ft. from S of SW cor. of P. Michelick 50-ac. lease, Abst. 59, P. J. Mineral Sur. Waiting on a new mud pump; T.D. 5,396 ft.
Marathon Oil Co.'s No. 1 A. S. Jones, 990 ft. from NW and SW lines of J. D. Thomas Sur. 10¾-in. csg. at 455 ft.; drlg. sandy shale 1,470 ft.
Dick Schwab's No. 1 Lynch, 330 ft. out of NW cor. of 200-ac. tract in the George Jameson Sur. Location.
Smith and Thompson's No. 1 Haynes, 990 ft. out of NW cor. of 320-ac. tract and survey, J. Whitmire Sur., E of Leggett. Location.

REFUGIO COUNTY

Atkins & O'Neil's No. 1 M. Woods, 466 ft. from N and E lines of NW Sec. 8. Drlg. shale 3,893 ft.
Cecil Hagen et al's No. 1 Edith Clarkson, 1,736 ft. from N line, 2,820 ft. from E line of J. Coughlin Sur. Location.
Magnolia Pet. Co.'s No. 1 F. B. Rooke, 330 ft. from S line, 7,150 ft. from W line of Donna Roogas Sur. Drlg. shale 3,427 ft.
E. W. Price's No. 1 Juries, NW SE cor. Sec. 37, Bonnie View Subd. Location.

SAN AUGUSTINE COUNTY

Fidelity Exploration Co.'s No. 2 Bryan & Flourney, 400 ft. from No. 1. Drlg. shale 1,600 ft.

TRINITY COUNTY

Moore and McLaughlin's No. 1 White, 350

varas from N line, 263 varas from E line of 56-ac. tract, Goff Sur.
Rig up.

WALKER COUNTY

Seaport Oil Co.'s No. 1 W. B. Ross, in SE cor. of an 80-ac. tract out of the Wm. Hodge Sur.
S.D. 1,900 ft.

WALLER COUNTY

Stanolind O. & G. Co. et al's No. 1 J. W. Tharp, 466 ft. from S and E lines of J. M. Bennett Sur. No. 100.
7-in. csg. 6,998 ft.; prepare to drill plug; T.D. 7,004 ft.

WHARTON COUNTY

Whitehead and Rash's No. 1 C. T. and D. Kountze, 1,320 ft. from N line, 330 ft. from E line of S.A.&M.G. Sur., Sec. 1, Abstr. 328.
Location.

SOUTH LOUISIANA
ACADIA PARISH

Humble O. & R. Co.'s No. 1 American Rice Mills, 660 ft. S and 1,320 ft. W from NE cor. Sec. 27-10s-1e.
Tested mud, S.W. with a slight scum of oil; T.D. 6,889 ft.

Superior Oil Co. et al's No. 1 A. S. Newman, 2,000 ft. N and 1,120 ft. E of SW cor. Sec. 24-7s-1w.
Drlg. sandy shale 7,009 ft.

ASCENSION PARISH

Humble O. & R. Co.'s No. 2 S. Gumbel & Co., 500 ft. southwesterly from No. 1, 275 ft. easterly from road and approx. 475 ft. N of S line of tract, Sec. 33-10s-2e.
Running 9⅝-in. csg.; T.D. 5,716 ft.

AVOYELLES PARISH

Southern State Pet. Co.'s No. 1 Boyette, 330 ft. N and 330 ft. E of SW cor. Sec. 28-3n-5e.
Rig up.

BEAUREGARD PARISH

Richardson & Martin's No. 1 Southwest Lbr. Location.

CALCASIEU PARISH

Fohs Oil Co.'s No. 1 McIvor, 330 ft. S and W of NE cor. Sec. 14-9s-8w.
Location.

Fohs' No. 1 O. H. Castle, 330 ft. S and 330 ft. W of C Sec. 18-9s-3w.
7-in. csg. 6,900 ft.; T.D. 6,917 ft.; tested gas, small amount of oil; to pull screen and setting and take another core.

Gulf Prod. Co.'s No. 1 H. Starks et al, 1,650 ft. W and 1,980 ft. S of NE cor. Sec. 26-11s-12w.
Drlg. sand 362 ft.

Humble O. & R. Co.'s No. 1-B Industrial Lbr. Co., 466 ft. N, 1,399 ft. W of the SE cor. Sec. 27-8s-12w.
Abd. 9,352 ft.

Plummer & McDaniels' No. 1 Cockburn-Hood, 1,072 ft. E and 2,400 ft. N of SW cor. Sec. 13-10s-12w.
Drlg. shale 6,490 ft.

Texas Co.'s No. 1 Nickerson, 3,139 ft. N and 3,238 ft. W of SE cor. Sec. 12-9s-8w.
Building derrick.

Union Sulphur Co.'s No. 1 Powell Lbr. Co., 660 ft. N of No. 1 State, Sec. 12-9s-8w
Drlg. shale 2,530 ft.

Union Sulphur Co.'s No. 2 State, 748 ft. S and 8 ft. E, NW cor. SW Sec. 12-9s-8w.
10-in. csg. 1,357 ft.

Union Sulphur Co.'s No. 3 State, 2,135 ft. S, 2,340 ft. E of NW cor. Sec. 12-9s-8w.
Location.

Union Sulphur Co.'s No. 1 Castle, 326 ft. N and E of NW Sec. 13-9s-8w.
Building foundations.

Union Sulphur Co.'s No. 1 Buhler, 1,485 ft. N and 425 ft. W of SE cor. Sec. 11-9s-8w.
Drlg. shale 1,006 ft.

Wheeler Oil Co.'s No. 1 Gabbert, 1,322 ft E and 548 ft. N of SW cor. of Sec. 28-9s-7w.
Drlg. shale 7,130 ft.

EAST FELICIANA PARISH

Thompson Creek Oil Co.'s No. 1 Fannie Noland, 2,600 ft. E and 1,580 ft. N of SW cor. Sec. 70.
S.D. 1,490 ft.

EVANGELINE PARISH

Humble O. & R. Co.'s No. 1 Haas, 1,250 ft SE of Bayou Nezpique, 466 ft. NE of SW line of Sec. 22-4s-1w.
Drlg. shale, streaks of sand 7,692 ft.

CAMERON PARISH

Texas Co.'s No. 1 Jessen, 1,170 ft. E and 550 ft. N of C Sec. 24-14s-10w.
Drlg. shale and lime 5,118 ft.

JEFFERSON DAVIS PARISH

George W. Strake's No. 1 Calcasieu Natl Bank, 200 ft. S and E of NW cor. SE NE Sec. 12-9s-6w.
Drlg. shale 8,012 ft.

JEFFERSON PARISH

Texas Co.'s No. 1 Bayou St. Dennis, 20,907 ft. S, 4,853 ft. E of NW cor. of Twp., Sec. 19-17s-24e.
Building foundation.

LAFOURCHE PARISH

Barnsdall Oil Co.'s No. 3 Harang Plantation.
Drlg. sand 6,381 ft.

Emerald Pet. Co.'s No. 1 Bowie Lumber Co., 4,431 ft. N and 1,632 ft. E of SW cor. Sec. 53-10s-8e.
Drlg. shale 7,380 ft.

R. L. Gay, trustee's No. 1 Godchaux, 3,920 ft. N and 1,746 ft. E in common cor. of Lots 34 and 26, Twp. 15s-19e.
Abd. 6,000 ft.

Southern Sulphur Corp.'s No. 1 D. L. Lagraize, 800 ft. E of NW cor. of Lot 7, thence 250 ft. S of Sec. 26-21s-22e.
Spudded and shut down.

PLAQUEMINES PARISH

Venice Corp.'s No. 1 Burras.
Drlg. rock 1,682 ft.

RAPIDES PARISH

J. B. Evers' No. 1 G. Wettermark, 540 ft. S and 520 ft. E, NW cor. NE SW Sec. 35-6n-2e.
Rig up and S.D.

C. D. Lee's No. 1 Barrett, 330 ft. NW of SE line and 880 ft. NE of SW line of Sec. 40-5n-1w.
Rig up and S.D.

ST. BERNARD PARISH

Danciger's No. 1 Battles, 836 ft. N, 2,198 ft. W of SE cor. Sec. 135-14s-14e.
Cmtd. csg.; moved off rig; T.D. 6,001 ft.

ST. LANDRY PARISH

Bailey Gaunce's No. 1 Lewis, 300 ft. N and E of SW cor. of NW of NE of Sec. 39-5s-6e (workover).
Washing to bottom 5,043 ft.

H. J. Weir's No. 1 Declouet, Sec. 108-8s-5e, near Lafayette Parish line and 3 miles N of Anse La Bute Field.
S.D. 2,322 ft.

ST. MARTIN PARISH

Texas Co.'s No. 6 St. Martin Land Co., 660 ft. S and 500 ft. W of NE cor. SE Sec. 17-8s-7.
T.D. 9,767 ft.; drill pipe stuck; prepare to abd.

TANGIPOHA PARISH

R. A. Compton's No. 1 Lake Superior Piling Co., 200 ft. W and N of SE cor. Sec. 19-5s-9e.
Prepare to spud.

VERMILLION PARISH

Moore Bros.' No. 1 Brussard, 350 ft. S of N line, 250 ft. E of W line, NE cor. Sec. 32-11s-3e.
T.D. 4,056 ft.; fishing.

La.-Ark. Wildcats

(Continued from Page 60)

NATCHITOCHES PARISH

Clyde Crichton's No. 1 Friedman Est., 406 ft. N, 428 ft. E, SW cor. Sec. 52-7-6.
Drlg. 2,085 ft.

Jack Lent's No. 1 Brown Lbr. Co., 400 ft. S, 300 ft. E, NW cor. NE SW Sec. 27-9-13.
T.A. 2,470 ft.; old T.D. 3,002 ft.

Missouri Drlg. Co.'s No. 1 Brown Lbr. Co., 400 ft. N, 330 ft. W, SE cor. Sec. 5-10-10.
S.D. 1,033 ft.

Roy A. Raines et al's No. 1 Raines est., 330 ft. N and E. SW cor. Sec. 8-9-10.
Drlg. 3,110 ft.

OUACHITA PARISH

Hatcher & Evans' No. 11 fee, 2,065 ft. S, 3,394 ft. E, NW cor. Sec. 17, in Sec. 41-19-4e.
Rigging up.

RAPIDES PARISH

C. D. Lee, trustee's No. 1 Baird Est., SE cor. Sec. 40-5n-1w.
Rigged up and S.D.

RED RIVER PARISH

Sterling O. & R. Co.'s No. 1 Long Bell, 150 ft. N and W, SE cor. NE SE Sec. 19-13-9.
Set 10-in. 80 ft.; rep. rig. 660 ft.

Windsor Oil Co.'s No. 3 Jenkins, 1,905 ft. E, 660 ft. N, SW cor. Sec. 11-12-11.
Drlg. 1,965 ft.

SABINE PARISH

H. J. Brothers et al's No. 1 Edwards, 300 ft. S and W, NE cor. SW NW Sec. 29-9-13.
W.O.S.R. 1,887 ft.

R. B. Campbell et al's No. 1 Cook Land Co., 150 ft. N, 300 ft. W, SE cor. NW NW S.D. 2,130 ft.
Tested dry after acid; S.D.; W.O. 1,935 ft.

Helena Oil & Gas Co.'s No. 1-B Graham, 330 ft. S and W NE cor. NE NW Sec. 20-9-13.
S.D. 2,000 ft.

Lawson-Leavell's No. 1 Whitney Corp., 330 ft. N and E, SW cor. NE SW Sec. 5-9-13.
Whipstocking 2,742 ft.

Jack Lent's No. 1 Williams, Sec. 13-7-11.
Partly rigged up and S.D.

Dr. O. B. Hicks' No. 1 Neal, SE SW SE Sec. 18-9-12.
Set 10-in. 40 ft.

Strickland et al's No. 1 Whitney Corp., Sec. 32-10-12.
S.D. 1,448 ft.

TENSAS PARISH

Schumacher, tr.'s No. 1 Curry, Sec. 39-11-12e.
Arranging to deepen 3,750 ft.

UNION PARISH

Interstate Nat. Gas Co.'s No. 1 Jenny, 1,950 ft. N, 735 ft. W of C. Sec. 7-20-4e.
Comp.; 12,000,000 ft. of gas, 2,148 ft.

ARKANSAS
ARKANSAS COUNTY

Grand Prairie Realty Co.'s No. 1 Fischer, 200 ft. S and E, NW cor. NE NW Sec. 6-6s-4w.
Fishing for swab 1,724 ft.

ASHLEY COUNTY

J. D. Houseman et al's No. 1 Boreine Farms, 660 ft. S and W, NE cor. Sec. 1-18-8.
Derrick.

CALHOUN COUNTY

R. J. McMurray's No. 2 Calion Lbr. Co., 330 ft. N and W, SE cor. Sec. 33-15-14.
Drlg. 2,350 ft.

HEMPSTEAD COUNTY

E. A. Austin's No. 1 McWilliams, 300 ft. N and W of SE cor. NW SW Sec. 19-13-23.
S.D. 2,470 ft.

A. H. Bagnelle's No. 1 Trattner & Rhinehart, Sec. 2-13-26.
S.D. 1,992 ft.

LAFAYETTE COUNTY

Douglas Lawn's No. 1 Camp, 330 ft. S and W, NE cor. SW SE Sec. 14-15-23.
Dry and abd. 3,010 ft.

W. H. Harvey's No. 2 Allen, Sec. 18-19-24.
Drlg. 2,250 ft.

LONOKE COUNTY

J. G. Strahan's No. 1 Hardin, Sec. 13-2s-7w.
Drlg. gumbo 1,297 ft.

MILLER COUNTY

Duluth-Ark. Oil Co.'s No. 4 Beck, SE cor. SE SW Sec. 34-15-26.
W.O.S.R. 2,941 ft.

Fitzwater et al's No. 1 Norson, SW cor. SE SW Sec. 20-15-27.
S.D. 3,177 ft.

Ark. Oil, Gas & Ref. Co.'s No. 1 Beck, SW cor. NW SW Sec. 34-15-26.
1,200 ft. oil in hole at 2,920 ft.

King Oil Corp.'s No. 1 C. H. Schroder, 200 ft. N, 330 ft. E, SW cor. SW NE Sec. 24-14-28.
S.D. for drlg. line 3,152 ft.

Magnolia Pet. Co.'s No. 6 Olivet, 330 ft. S and E, NW cor. NE NW Sec. 3-16-26.
Fishing for D.S. 2,938 ft.

A. C. Roan's No. 1 Frost Est., 150 ft. N and W, SE cor. SE SW Sec. 8-15-26.
Set 10-in. 120 ft.

Thorntree Oil Corp.'s No. 2 E. H. Beck, SE cor. SW SW Sec. 34-15-26.
W.O.S.R. 2,933 ft.

Lee Timberlake's No. 1 Frost Est., 330 ft. N and E, SW cor. SW SE Sec. 27-15-26.
S.D. 1,275 ft.

John Wrather's No. 2 H. E. Beck, 330 ft. N and W, SE cor. SW SE Sec. 34-15-26.
Moving in rig.

NEVADA COUNTY

O. F. Whittaker's No. 1 Wesley, Sec. 2-15-20.
Comp.; pumping 10 bbls., 3,142 ft.

OUACHITA COUNTY

F. A. Book et al's No. 1 Arnold, Sec. 24-15-16.
S.D. 2,032 ft.

T. J. Gaughan's No. 2 M. Bragg, 330 ft. S and E, NW cor. NE SE Sec. 25-13-18.
Location.

T. J. Gaughan's No. 1 Cartier, 330 ft. S and E. NW cor. SE SE Sec. 25-13-18.
S.D.; W.O. 2,500 ft.

UNION COUNTY

J. E. Crosbie, Inc.'s No. 1 E. F. Gregory, 330 ft. S and E, NW cor. NE SW Sec. 10-17-14.
Comp.; flowing 100 bbls., 3,347 ft.

J. E. Crosbie, Inc.'s No. 1 W. E. Gregory, 330 ft. S and E, NW cor. NE Sec. 15-17-14.
Testing 3,303 ft.

Durand Dev. Co.'s No. 1 Ezzell, 330 ft. S and W. NE cor. Sec. 13-17-15.
Drlg. 50 ft.

H. L. Hunt's No. 11 J. D. Gregory, C NE SW SE Sec. 10-17-14.
Rigging up.

H. L. Hunt, Inc.'s No. 12 E. F. Gregory, C NW SE SE Sec. 10-17-14.
Comp. 75 bbls. oil and 10,000,000 ft. gas, 3,338 ft.

H. L. Hunt, Inc.'s No. 9-A J. D. Gregory, C NW SE NE Sec. 10-17-14.
Set 7-in. 3,296 ft.

E. R. Henderson's No. 2 Vines, NW cor. SW SE Sec. 29-18-14.
Set 6-in. 2,164 ft.

H. L. Hunt's No. 14 E. F. Gregory, 330 ft. S and W, NE cor. SW SW Sec. 11-17-14.
Comp.; 75 bbls., 3,331 ft.

H. L. Hunt's No. 15 E. F. Gregory, 330 ft. N and W, SE cor. Sec. 10-17-14.
Drlg. 3,278 ft.

H. L. Hunt's No. 18 E. F. Gregory, 330 ft. N and E, SW cor. Sec. 11-17-14.
Location.

M. D. Ingall's No. 1 A. J. Perdue, C SE NW SW Sec. 4-17-14.
Derrick.

T. L. James & Co.'s No. 1 Gregory, 330 ft. S and W, NE cor. N½ NW SW Sec. 10-17-14.
Set 10-in. 148 ft.; drlg. 1,630 ft.

Mrs. R. K. Jones et al's No. 1 Davis, 330 ft. N and W, SE cor. NW NW Sec. 28-16-14.
Set 7-in. 2,746 ft.; T.D. 2,765 ft.

Lion Oil Ref. Co.'s No. 6 H. L. Rowland, 330 ft. S and W, NE cor. Sec. 15-17-14.
Coring 3,251 ft.

Monroe Prod. Co.'s No. 1 Z. Bolinclair, 330 ft. S and W, NE cor. Sec. 16-17-14.
Rigging up.

C. H. Murphy's No. 1 Union Saw Mill Co., 330 ft. N, SE cor. NW SE Sec. 29-18-11.
Set 10-in. 198 ft.

C. E. Murdock's No. 8 J. M. Gregory, C NW NE SE Sec. 10-17-14.
Rigging up.

C. E. Murdock, Inc.'s No. 7 J. M. Gregory, 330 ft. N, 330 ft. W, SE cor. NE SE Sec. 10-17-14.
Junked hole 3,317 ft.; skidded over.

C. E. Murdock's No. 1 R. Pumphrey, C SW NW NE Sec. 11-17-14.
Derrick.

Reuter Oil Co., Inc.'s No. 1 J. L. Kinard, 330 ft. S and E, NW cor. SE NW Sec. 32-18-14.
Pumping 2,189 ft.; no gauge.

Geo. L. Pace's No. 1 Union Saw Mill Co., 330 ft. S and W, NE cor. NE SW Sec. 24-18-12.
Set 10-in. 186 ft.

S. H. A. Oil Co.'s No. 4 Taylor, 330 ft. N and E, SW cor. NW SE Sec. 10-17-14.
Set 7-in. 3,292 ft.

S. H. A. Oil Co.'s No. 3 Taylor, 330 ft. S and W, C Sec. 10-17-14.
Set 7-in. 3,322 ft.

S. H. A. Oil Co.'s No. 2 J. W. Taylor, 330 ft. S and W, NE cor. NW SE Sec. 10-17-14.
Comp.; pumping 150 bbls., 75% S.W., 3,467 ft.

Skelly Oil Co.'s No. 7 Perdue, 330 ft. N and E SW cor. SE NW Sec. 10-17-14.
Set 10-in. 156 ft.; drlg. 2,236 ft.

Grady Vaughn's No. 1 T. B. Rowland, 330 ft. S and E, NW cor. Sec. 14-17-14.
Derrick.

WOODRUFF COUNTY

L. P. Lively's No. 1 Perkins, 330 ft. N, 360 ft. E, SW cor. SE SE Sec. 5-5n-2w.
Rigging up.

J. N. Watkins et al's No. 1 Upshaw, 330 ft. N and E, SW cor. S WSec. 17-5n-2w.
Rigging up.

MISSISSIPPI
AMITE COUNTY

Mineral Resources, Inc.'s No. 1 Anderson, C NE NW Sec. 14-3n-3e.
S.D. 550 ft.

BOLIVAR COUNTY

White & Jones' No. 1 Ballou, SE SE NW Sec. 17-24n-7w.
S.D. 20 ft.

CLARKE COUNTY

Clarke County Oil Co.'s No. 1 Dora Butler, C SW SW Sec. 15-2n-16e.
Set 10-in. 63 ft.

HARRISON COUNTY

Big Ridge Oil Co.'s No. 1 Hinzin, NE Sec. 13-7s-10w.
S.D.; W.O. 1,100 ft.

HINDS COUNTY

Atkins & Hightower's No. 2 Sander, 660 ft. E, 160 ft. N, SW cor. NW SW Sec. 30-6n-2e.
Drlg. plug 2,430 ft.

ISSEQUENA COUNTY

Pelican Oil & Gasoline Co.'s No. 1 Martin & Bender, 300 ft. S and E, NW cor. Sec. 11-12n-8w.
Drlg. 3,195 ft.

JONES COUNTY

Snow-Black Pet. Co.'s No. 2 Watson, 520 ft. W, 200 ft. S, C Sec. 24-7n-13w.
T.A. 3,900 ft.

LAUDERDALE COUNTY

Bob Dalton's No. 1 Bounds, Sec. 34-7n-15e.
Set 10-in. 560 ft.; S.D.; W.O.

MONROE COUNTY

P. J. McAlpine's No. 1 Frank Rye, Sec. 15-15s-17w.
Set 6⅝-in. 3,100 ft.

P. J. McAlpine's No. 1 Crook, 1,090 ft. S 90 ft. W, NE cor. Sec. 15-13s-13w.
Drlg. 1,375 ft.

WALTHALL COUNTY

Mutual O. & G. Co.'s No. 1 Boyd, SW cor. SW SE Sec. 24-2n-9e.
Partly rigged up and S.D.

WASHINGTON COUNTY

Perkins & Dees' No. 1 Lee, 1,500 ft. E, 500 ft. N, SW cor. Sec. 33-15n-3w.
Set 10-in. 300 ft. and S.D.

WINSTON COUNTY

Jack Vale et al's No. 1 Moody, 713 ft. N, 667 ft. E, SW cor. NW SW Sec. 3-13n-14e.
Reaming 785 ft.

La.-Ark. Proven Fields

NORTH LOUISIANA
CADDO—BLANCHARD

W. T. Boyd's No. 3 Mitchell, Sec. 6-18-16.
Set 8-in. 20 ft.; drlg. 960 ft.

CADDO—HOSSTON

Shoreline Oil Corp.'s No. 44 Crystal, 220 ft. S and E of C Sec. 13-21-16.
Derrick.

SABINE PARISH—ZWOLLE

Alexander & Crane's No. 1 Fogman, SE cor. N½ SW NE Sec. 18-7-11.
S.D.; W.O. 2,373 ft.

Ivan A. Allen's No. 1 La. Long Leaf, 330 ft. N and W, SE cor. NW SE Sec. 12-7-11.
S.D. 2,120 ft.

Crichton & Co.'s No. 1 Williams, 660 ft. N and E, SW cor. SW SE Sec. 6-7-11.
Drlg. 2,615 ft.

Dyer et al's No. 1 McCollister, 330 ft. S and E, NW cor. SW NE Sec. 24-7-12.
S.D. 1,100 ft.

Foster & Hartman's No. 1 Bowman Hicks, 330 ft. S and E, NW cor. NE Sec. 10-7-12.
Dry and abd. 2,696 ft.

E. D. Holcomb's No. 1 Porter, 330 ft. S, 330 ft. W, NE cor. SE Sec. 7-7-11.
Pulling liner 2,580 ft.

H. C. Maulding's No. 1 Davis, 350 ft. N and W, SE cor. NE NE Sec. 2-7-11.
Rigging up.

H. C. Maulding's No. 2 DeLatin, 330 ft. S and E, NW cor. NE SE Sec. 3-7-11.
S.D. 2,250 ft.

K. C. Peterson et al's No. 1 Bowman-Hicks, 330 ft. S and E, NW cor. SW NW Sec. 2-7-9.
Derrick down.

W. L. Posey's No. 1 Burkett, 330 ft. N and E, SW cor. NW SW Sec. 10-9-13.
W.O.S.R. 2,011 ft.

Tex.-La.-Ark. Oil Co.'s No. 1 Pickering Lbr. Co., Sec. 3-3-12.
Recmtd. 10-in. 134 ft.; T.D. 2,210 ft.
S.D. 2,742 ft.

EAST TEXAS (BORDER COUNTIES)
CASS COUNTY

Broderick & Calvert's No. 2 Cagle, H. Cunningham Sur.
Dry and abd. 4,002 ft.

HARRISON COUNTY

R. C. Payne et al's No. 1 Lowery, E. D. Spain Sur.
P.B. to 2,524 ft.

MARION COUNTY

Ed S. Holman's No. 1 Henderson, R. Bennington Sur.
Junked hole; skidded over and R.U. on new hole.

PANOLA COUNTY

R. H. Davis' No. 1 Wooten Est., Winnie Mann Sur.
Cmtd. back and testing.

Givens & Holloway's No. 1 Wooten est., Winnie Mann Sur.
T.A. 2,153 ft.

R. W. Price's No. 1 Crawford, J. A. Williams Sur.
Set 10-in. 64 ft.

Fred Stovall Drlg. Co.'s No. 1 H. D. Ivey, P. Martin H.R.S.
S.D. for csg. 1,980 ft.

Thomason Drlg. Co.'s No. 1 Cadenhead, Jas. Smith Sur.
Rigging up.

SHELBY COUNTY

Cliff Stovall's No. 1 Pickering Lbr. Co., C H. Patterson Sur.
S.D.; rig repair, 1,485 ft.

O. P. Bush, trustee's No. 1 Pickering Lbr. Co., P. W. Harvey Sur.
S.D. 730 ft.

ALABAMA
CONECUH COUNTY

Ray L. Eastabrook's No. 1 Miller Mill Co. W½ NE Sec. 1-4n-12e.
Rigging up.

COVINGTON COUNTY

Geometer Prod. Corp.'s No. 1 Culbreath, SW cor. SW NE Sec. 8-2n-14e.
Rigging up.

HOUSTON COUNTY

Rice O. & G. Co.'s No. 1 Oakley est., SE cor. NW SW Sec. 9-3n-29e.
S.D.; W.O. 2,506 ft.

LAMAR COUNTY

DeSoto O. & G. Corp.'s No. 1 Gardner, Sec. 22-15s-16w.
S.D. 4,182 ft.

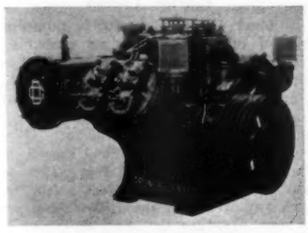
NEW AND IMPROVED EQUIPMENT

Gardner-Denver Announces Compressor of New Design

Carrying still further the trend toward more delivered air, lower power consumption and longer compressor life, Gardner-Denver engineers have developed a new six-cylinder two-stage water-cooled compressor embodying distinctive features.

These features, Gardner-Denver officials say, provide more delivered air, with a resultant saving in power cost.

An outstanding departure from conventional compressor design is the use of



four small-diameter low-pressure cylinders, instead of two large ones, this construction permitting the use of small, lightweight pistons and reducing the inertia loads. The use of two pairs of low-pressure water-cooled cylinders provides lower air temperatures than previously obtained in small vertical compressors, with corresponding saving in horsepower. By water cooling the cylinder walls, the manufacturer says, lower wall temperatures are obtained, with better lubrication and longer life. Distortion of cylinder walls from heat is eliminated, and, in addition, the compressor operates independently of atmospheric temperatures.

These six-cylinder compressors, it is said, adequately meet the need for more compact machines having efficiencies comparable to those of large two-stage horizontal compressors of the same capacity.

Mountings include motor mounted on shaft; V-belt to electric motor, Diesel or gasoline engines; or direct-connected through flexible flywheel coupling to motor and engines.

HAMMOND-GRAY CO. ORGANIZED

Under the name of Hammond-Gray Tank Co., the former Hammond-Gibson Tank Co., Longview, Tex., will continue to carry on the business of the late B. O. Hammond and Fred Gibson. Mrs. Veeta Hammond, widow of B. O. Hammond, retains her interest and Sam B. Gray, formerly with Dunniway Brothers, rig builders of Longview, has entered the company. The old office in Greggton, Tex., will be maintained. Distribution of bolted steel tanks and wooden tankage, and rig building will be the business carried on.

INSTRUMENT COMPANIES UNITE

Consolidation of the Brown Instrument Co., Philadelphia, Pa., with the Minneapolis-Honeywell Regulator Co., Minneapolis, Minn., is announced. The Brown Instrument Co. will continue as a separate company with its existing organization but as a subsidiary of Minneapolis-Honeywell Regulator Co. Richard P. Brown will continue as president of the Brown Instrument Co. and will become an officer and director of the Minneapolis-Honeywell Regulator Co. Brown sales and service facilities will be continued from the present main office and factory in Philadelphia and the district offices throughout the country. By coordinating the research, development and engineering activities of these two companies many advantages are expected to be gained.

Notes About Trade Literature

A new line of Hays "Draftrol" electric contact gauges for indicating and controlling draft, pressure and differential draft or pressure is described and illustrated in Bulletin No. 2018 obtainable from the Hays Corp., Michigan City, Ind.

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The Staynew Filter Corp., Rochester, N. Y., offers a booklet of 32 pages devoted to Protectomotor high-efficiency air filters for every purpose, including air compressors, gasoline engines and equipment requiring a compact, positive filter.

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A request sent to the Petroleum Specialty Co., Post Office Box 785, Station H, Los Angeles, Calif., brings a circular containing details concerning Gage-o water-finding paste for accurately gauging tanks.

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Gas, refining and chemical companies should be interested in a circular prepared by Bishinger-Koehler Manufacturing Co., 7838 Kelly Street, Pittsburgh, Pa., describing the B-K inhalator for resuscitation purposes.

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An attractive 8-page leaflet is being mailed by the Air Reduction Sales Co., Lincoln Building, New York, describing its heavily coated steel shielded arc electrodes 78, 79, and 81. No. 78 is for flat welding, and 79 for vertical and overhead work. No. 81 is similar to the two others, but its elongation runs about 5 per cent greater.

—

The current issue of Nickel Steel Topics, published by the International Co., New York, contains among its features interesting articles on "Welded Pressure Vessels" and "Alloyed Wrought Iron Sucker-Rods."

—

Two new bulletins on single-stage volute centrifugal pumps have been issued by the Worthington Pump & Machinery Corp., Harrison, N. J., one describing type L Nos. 3 to 6 and the other describing types LA and LC Nos. 6 to 12.

—

Harbison-Walker Refractories Co., 1800 Farmers Bank Building, Pittsburgh, Pa., has issued a folder entitled "Insulate With Safety at Any Temperature." It emphasizes the importance of selecting the proper refractory as well as the proper insulating material for any insulated furnace construction and describes both insulating brick and lightweight brick and their applications.

Clip-Type Gate Valve Has New Features of Interest

A clip-type gate valve with several new features has been added to the line of the Reading-Pratt & Cady Co., Inc., Bridgeport, Conn. This valve has a round bonnet, permitting the use of a male and female joint with asbestos gasket assuring tightness.

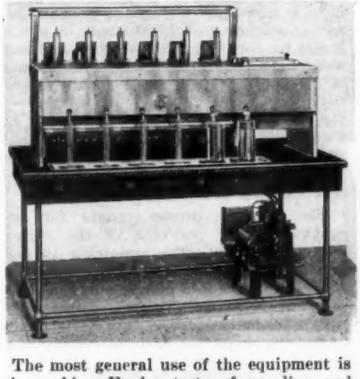
A full U-bolt is used to hold the bonnet joint tight. When the nuts on these bolts are tightened, pressure is equalized on both sides. Three sets of guides on the body and two solid eye lugs on the bonnet hold the U-bolt and eliminate possibility of slipping.

Among the internal features are the full-thickness I-beam cast wedge which brings sturdiness to the valve sea and permits the use of full size body guides to assure correct seating. A horseshoe connection is used to assemble the spindle and wedge. This provides greater strength and greater lifting surface. Guide slots in the wedge are machined. The valves are made in all-iron and bronze mounted construction.

Spang, Chalfant & Co., Inc., pipe manufacturer, Pittsburgh, Pa., has transferred Gordon Fisher, Jr., of the Pittsburgh sales department to Tulsa, with offices in the National Bank of Tulsa Building. A. S. Weaver, formerly in the Dallas, Tex., office, has headquarters now in the Second National Bank Building, Houston, Tex.

Distillation Range of Oil Products Shown by Device

A new and improved apparatus for determining the distillation range of petroleum products is now available for refinery and gasoline plant laboratories.



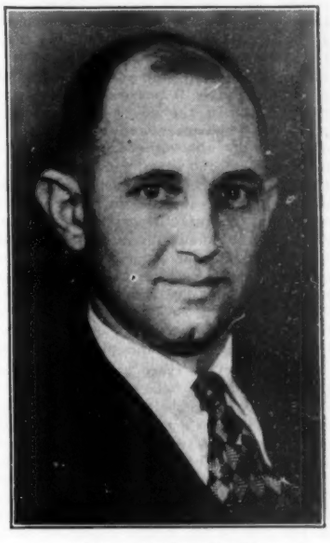
The most general use of the equipment is in making Engler tests of gasoline and kerosene, the apparatus conforming to requirements of A.S.T.M. methods No. D-86-30 and No. D-216-32, according to the manufacturers.

The illustration shows the Superior distillation unit, six-tube size, mounted on the work table. It is divided into two sections, the burner compartment and the condensing tank. Within this tank and surrounding the condensing tubes is a brine or alcohol solution automatically held at a constant temperature between 32° F. and 34° F. by means of mechanical refrigeration.

A saving of time, lower testing costs and a higher degree of accuracy are accomplished by this equipment. The Superior distillation unit is made in two sizes, with either six or eight condensing tubes. The Ward Refrigerator & Manufacturing Co., Los Angeles, is the manufacturer.

Men Well Known in the Equipment Field

W. C. Dreyer, petroleum engineer, is now located in the southwestern district of the Westinghouse Electric & Manufacturing Co. with headquarters in St. Louis, thereby making specialized engineering services available for the West Texas, Mid-Continent and Gulf Coast oil fields.



W. C. DREYER

William (Bill) C. Dreyer attended the Glendale Union High School, Glendale, Calif., and graduated from the California Institute of Technology in 1924 with a B.S. in electrical engineering. Leaving college he entered the graduate student course of the Westinghouse Electric & Manufacturing Co. in East Pittsburgh, Pa. Upon its completion he became an industrial engineer for that company, working on pumping and drilling equipment for oil wells, pipe line pumping and refinery electrification.

New Surveying Instrument Added to Sperry-Sun Line

Sperry-Sun Well Surveying Co., 1608 Walnut Street, Philadelphia, Pa., has acquired the exclusive sales and distributing rights for the H-K, or Hewitt-Kuster, directional magnetic clinograph. As a result, the company now offers the trade a complete line of well surveying instruments designed to determine the straightness or direction of the drill hole.

The H-K directional magnetic clinograph introduces an exclusive method of recording in single readings both the amount and the direction of inclination, utilizing the triangular suspended cross hair plumb bob and floating compass principles, together with a simple, automatically operated and practically foolproof photograph camera.

The H-K clinograph is designed for open holes only. It is lowered into the hole on a sand or bailing line at a speed ranging from 400 to 800 feet per minute.

As in the case of the other Sperry-Sun instruments, the Surwel gyroscopic clinograph and the Syfo clinograph, permanent records are made available showing the results. A booklet gives complete information.

Application of Electric Power in the Oil Fields of the Texas-Louisiana District

By E. P. HUBBARD
Assistant Superintendent of Production, Gulf Production Co., Houston, Tex.*

This paper is to be limited to a general discussion of the application of electric power in the oil fields of the Texas and Louisiana Gulf Coast section.

Prior to 1920 the use of electric power in the oil fields was sporadic. Beginning at this time, however, a general movement began to equip new fields for electric operation, and to convert old fields from gas and steam engines to motor drive. The price of oil reached a high point of $3 per barrel. The news spread that, by the use of electric motors, production could be increased from 10 to 15 per cent. In many of the fields the gas production had declined to a point where the fuel oil requirements presented nearly 9 per cent of the total production. In the space of about four years, five power plants were put in operation by the oil companies for the sole purpose of operating their producing properties with electrical equipment. The utilities, ably abetted by the electric equipment manufacturers, were quick to realize the potentialities of this new type of load, and a network of transmission lines began to take shape, and today it is conservatively estimated that 90 per cent of the oil-producing operations in the Texas and Louisiana Gulf Coast are served by the public utilities.

In this section there are approximately 3,000 wells, of which 1,250 are flowing and 1,750 are being produced on the pump. While no accurate data are available it is estimated that these wells require an average of 15,000 kilowatts for their pumping and auxiliary operations. Annually the producing fields consume electric power to the tune of $1,250,000. In addition to the highly important revenue factor, the oil field power requirements afford a base load of considerable value to the operation of power plants and transmission systems. The load factor is probably considerably higher than any other type of load. No doubt many communities, or irrigation plants owe the availability of electricity for their operations to the proximity of transmission lines built primarily to serve the oil fields. Since 1929 the petroleum industry has experienced sharp curtailment in its production operations, notably in the pumping classification, but it is doubtful if their reduction in power requirements has been nearly so drastic as that experienced by other industries.

Distribution of Energy

Whenever a producer adopts the use of electrical energy in any given field the application is generally 100 per cent. The drilling rig is usually the only exception and many companies operate motor driven rigs. A typical distribution of the energy consumed would be as follows:

	Pct.
Pumping wells	65
Gathering pumps	20
Drilling rigs	4
Fresh water supply	4
Miscellaneous	7
	100

In the Gulf Coast territory the load requirements for the average pumping well is approximately 6 kw. The range is from 1.5 k.w. per well operated by central powers to about 15 k.w. for some of the deeper and heavier water wells. In some of the Edwards lime and Woodbine sand fields these figures will reach 50 k.w. per well. In the Gulf Coast an average of about 5 bbls. of water is lifted for each barrel of oil recovered on the pump. During the palmy days one of the prime advantages of electric equipment was its ability to maintain 97 per cent continuity of operation on pumping wells. Due to proration and other causes the average hours operated per day per well reached a minimum of about 17. An encouraging note is sounded in that this figure has now increased to about 22 hours per day. Not all of this increase can be attributed to increased production as some of the changes are due to fitting the operation and equipment so as to produce the same volumes over a longer period of time, thus improving load factor and reducing the load on the equipment.

Pump Classification

The term "gathering" pumps is applied to all field pumps used for the transfer of production from the lease to the main pipe line storage. Included are pumps used to transfer production from the lease tanks to central dehydrating plants, pumps used to "pick up" oil or water from firewalls and sumps, and pumps used for delivering oil from lease tanks and treating plants to the pipe line storage. The first two classes are usually classified as low pressure pumps with loads ranging between 5 and 25 horsepower while the last named are high pressure pumps usually loaded from 25 to 50 horsepower. These pumps ordinarily operate from five to seven hours per day.

Electric drilling rigs are not in such general use as other producing equipment. Their best application is in the proven fields where power lines are available. It is only occasionally that a wildcat is so favorably located as to have a source of electric power available. In such instances the saving in fuel is material as it is often necessary to truck fuel over bad roads and the savings made by the use of electricity are obvious.

The connected load on a drilling rig for deep drilling is usually around 400 horsepower. This scales down to the lighter rigs for shallow drilling whose connected load may be only 100 horsepower. The power consumption varies with the depth, formation, and speed of drilling and for this reason it is difficult to state any very definite figure. Nine hundred-foot wells have been drilled with a minimum of 2,000 k.w.h. or about 2 k.w.h. per foot. Seven thousand-foot wells have been drilled with a maximum of 210,000 k.w.h. or about 30 k.w.h. per foot. A general average of 4,000 feet for 20 k.w.h. per foot should serve as a close approximation. As a general rule the pumps require 65 per cent of the total power with the remaining 35 per cent used by the rotary and hoist.

The foregoing items account for approximately 90 per cent of the power used in the field. The remaining 10 per cent is used by the various auxiliaries such as fresh water pumps and compressors, waste water disposal, electric defield illumination.
hydrators, shops, and general cottage and

Problems to Solve

It is conservatively estimated that the field lines, transformers, and motors in use in the coastal fields represent an investment by the producing companies of $10,000,000, and that the gross revenue to the utilities will exceed $1,250,000 annually. The operator, however, should accept the responsibility of properly outlining his problems and proffer his experience and counsel.

There are many problems of varying degrees in importance worthy of consideration. To three of these attention is particularly directed: First, distribution voltage; second, contracts; and third, rate schedules. Many oil companies operate schedules. Many oil companies operate in more than one field and, often, are served by more than one utility company. They encounter field distribution voltages ranging from 2,300 volts to 13,200 volts. The effects are obvious. It is believed that steps are being taken to remedy this condition and it is urged a conclusion be reached and a standard distribution voltage adopted. A great many contracts are signed over the protest of legal counsel. It is felt that the utilities, in their zeal to safeguard their interests from every conceivable angle, insert clauses and phrases which are burdensome to the consumer.

The solution of this problem should be easy; it is only necessary that the buyer and seller mentally reserve their positions, and ask no more than they would be willing to concede if their positions were actually reversed. After all, a contract is a "50-50" agreement. Probably no one problem has been so much the subject of discussion as "rate schedules." Any fair thinking man recognizes and appreciates the complexities that attend the construction of workable schedule of rates there is no question but that an expert specialist is required. This suggestion is offered. Perhaps the present schedules are an outgrowth of ideas originated with the first sale of power and expanded, exchanged, and adapted to meet new conditions as they presented themselves. Naturally the fundamentals must remain, but suppose we discard the superstructure built to accomodate the steel, mining, irrigation, or what-have-you industry and on the basic foundation erect a rate schedule particularly adapted to the petroleum producing industry. The Petroleum Electric Power Club provides a powerful means of designing and promulgating uniform schedules on which the oil producer may purchase power wherever he may be.

*Before Electric Power Club, sixth annual conference, Beaumont, Tex.

New York-Pennsylvania Gas Field Developments

(Continued from Page 68)

was bailing water at 5,189 feet at its No. 2 John Higley, same township. Bayliss was drilling plug at its No. 1 Earl Pye, Genesee Township, same county. United Producers was drilling at 100 feet on the J. Ruppert farm, Hebron Township. J. B. Reed was shut down on the George C. Page farm, Allegany Township, Potter County. Updegraph was moving rig on the O'Donald farm Genesee Township, same county.

Hanley & Bird were drilling at 157 feet on the Effie Slingerland farm. Allegany Township, Potter County. Tioga Natural Gas was shut down at 4,470 feet at its No. 2 Emporium Bank, Shippen Township, Cameron County. Electro Geometer remained idle at its Armstrong-Forrest location in Norwich Township, McKean County. Penn United made a location on the A. J. Carpenter farm, Hebron Township, Potter County.

Clarion County

Bummer Oil & Gas Co. is pumping 3 bbls. of oil a day from its recent completion on the Smith farm, Paint Township, Clarion County. Alum Rock Co. is cleaning out on the Cummings farm, Ashland Township, same county. In this well the Fourth sand was at 1,178-89 feet, and the oil pay at 1,184-88 feet. The total depth is 1,253 feet. This company is drilling at 1,153 feet at its No. 1 Bank Lot well, Highland Township, same county. Huefner is shut down on the Weaver farm, Knox Township, same county.

CLASSIFIED ADVERTISING

Situations Wanted

Tech. grad. with 14 yrs. exp. in oil refinery design, construction, maintenance, and efficiency work, desires change. Address Box G-505, The Oil and Gas Journal, Tulsa, Okla.

LOU RAZEY—Go anywhere your deal. Open Feb. 1st. Address Box G-522, The Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED BANK CLERK. Now employed. 15 years' banking experience and 3 in tax office. Wants position as secretary, accountant or anything clerical, where opportunity offers. Address Box G-521, The Oil and Gas Journal, Tulsa, Okla.

Leases—Production

NEW MEXICO Oil and Gas Leases and royalties. Send 50 cents in stamps for new State Oil Map of New Mexico Roy G. Barton, Clovis, New Mexico.

NEW MEXICO—My weekly scout report furnishes complete and reliable information on New Mexico developments Send for copy. W. S. Patterson, Santa Fe, N. Mex.

BUY LAND—2½ acres, clear deed, for $75, $5 down, $5 month, in California's next prospective oil and gas field. Price will advance to $100 Feb. 1, 1935. Well down 660 ft. now. Kimbrough, 729 San Fernando Bldg., Los Angeles, Calif.

NEW WELL rated 1,000 barrels per day, depth only 1,180 feet, Wichita Daily Times, November 28th. Located Levin Survey, Central Archer County, Texas. Such a well should pay for itself first six days.

I have some very attractive Blocks on subsurface Highs and expect to drill at once, desire sell interest or acreage, or sell all of the well and keep offset. B. H. Hilburn. 915 Hamilton Building, Wichita Falls, Texas.

WHAT ABOUT 1935?

You, probably, want to buy or sell leases around drilling wells, production or royalty and have no reliable source of supply. You might finance a likely wildcat. We, on the ground, need an outlet. Meritorious propositions often go begging. This ad is intended to break the ice, and open negotiations. If you are prepared to exchange bank and other references and able to function, we would appreciate a line from you.

So. Land and Exp. Co.,
P. O. Box 33, Tyler, Texas.

Leases—Production

For Sale—300 acres oil lease in Real County, Texas. About 10 miles west of new oil discovery in Kerr County. C. Cohn, Whiteville, Tenn.

Help Wanted

ENGINEER-Salesman Wanted — Acquainted with operators of oil well and industrial contractors' equipment, and requirements of frictions and anti-friction material in Mid-Continent Field. Must have capability, follow instructions, proceed without supervision. Good opportunity for right man with an aggressive growing firm of long experience. Give full information for recognition. Address Box G-508, The Oil and Gas Journal, Tulsa, Okla.

CHEMIST Wanted with refinery operating and chemical laboratory experience. Good personality and ability to handle other men. State salary desired. Address Box G-504, The Oil and Gas Journal, Tulsa, Okla.

Incorporations

CHARTERS—Delaware best, quickest cheapest, most liberal. Free forms. Colonial Charter Co., Wilmington, Del.

DELAWARE CHARTERS—Fees small; submitted forms. Chas. G. Guyer 901 Market Street, Wilmington, Del.

Business Opportunities

THOUSAND acres timber land, price $5 acre. Half mineral oil and gas rights reserved. D. Cooper, Hamilton, Ala.

Wanted—Direct contact with refinery seeking outlet for Okla. B.S. and Neutrals. Lubolink Products Co., Chicago Hts., Ill.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Financing

JOHN MORRIS, Seventh Floor, 1237 Market Street, Philadelphia, will help float small deal. No stock selling. Send full facts in first letter.

JAMES E. MILLER CO., 207½ E. Third St., Tulsa, Okla., will co-operate with responsible parties seeking aid in financing projects of higher order.

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For Sale—Equipment

150—55,000; 37,500; 35,000 BBL. STEEL STORAGE TANKS

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SONKEN-GALAMBA CORPORATION

Personal Service—W. C. BERRY

64 N. Second Street Kansas City, Kansas.

FOR SALE
20 miles 3-in. line pipe, like new. Part of pipe 9-lb. tubing, stencil marks still legible. Price 18c per ft. f.o.b. cars Clarksburg. Wright Bros., Clarksburg, W. Va.

---

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air Compressor. Six-inch Oster Pipe Threading Machine. Also, large stock of lathes, pipe machines, milling machines, etc. Send for our list.
Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St. Cincinnati, Ohio.

4—INGERSOLL RAND Compressors, Type XOB, Two Stage. Low 10"x10", High 4½"x10". Complete with lubricators, inter coolers, etc. Powered by 75 HP G.E. Induction Motor.
1—75 HP GENERAL ELECTRIC Induction Motor.
1—24'x60'x12' High Wood frame sheet iron Engine Room. Address Box G-510, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE
AND WANTED TO BUY
Good Used Compressors, Diesel Engines, Boilers, Derricks, Hoists, Tanks, Pipe, Rail, Cars, Locomotives, Cranes. MISSISSIPPI VALLEY EQUIPMENT CO., 501 Locust St., St. Louis, Mo.

FOR SALE—2—40 H.P. 2 cycle Weber Gas engines with enclosed reversing clutches. 2—30 H.P. 2 cycle Superior gas engines with enclosed reversing clutches. General Machine & Supply Co., Wichita Falls, Texas.

AUCTION

By U. S. Bankruptcy Court
Friday, January 18th, 1935,
at 2 o'clock P.M.
For cash to Highest Bidder,
At former place of business of debtor,
CHASE—Rice County—KANSAS.

OIL REFINERY

Stills, Towers, Cooling Coils and Agitators	$22,695.53
Machinery	12,050.97
Tanks	20,864.90
Pipe and Fittings	7,271.36
Underground Pipe	8,571.15
Office Furniture	650.50
Gathering Lines	3,888.52
Laboratory Equipment	414.02
Construction: Switch, Electric Wiring and Lighting, wells and miscellaneous	21,165.84
Lease on refinery site	$97,572.79

Will be sold in parcels or as a whole as desired.

SECURITY PETROLEUM COMPANY,
Debtor,
Warren S. Earhart, Trustee
700 Grand Avenue, Temple Bldg.,
Kansas City, Mo.
Telephone Victor 3400-01.

FOR SALE—Cleveland Ditching Machine. Dug 6 miles of ditch. Machine and Trailer cost $5,500.00. Price $2,500 f.o.b. cars, Tulsa.
A. C. ASKEW
3004 E. Archer, Tulsa, Okla.

FOR SALE—15/30 H.P. Electric Motors, 440 volt, complete with grid controls. Rawls Elec. Works, Abilene, Tex.

Equipment Wanted

Refinery Wanted—Interested in buying small refinery, cash. Address Box G-520, The Oil and Gas Journal, Tulsa, Okla.

WANTED—50 to 90 horsepower Gas Engine, direct connected with air compressor capable 175 pounds pressure, for 400 foot water well. Give price, condition and location. Box 1015, Wewoka, Oklahoma.

WANTED TO PURCHASE—Complete set low temperature fractional apparatus for gas analysis of volatile hydrocarbon mixtures. Give detailed description and price. Box 949, Tulsa, Oklahoma.

WANTED—Horizontal steel tank, 100 lb. working pressure, approximately 6 ft. diameter, 20 ft. long. If priced right, might take several. Give full description and price. P. O. Box 1194 Fort Worth, Texas.

Royalties—Production

I HAVE four thousand acres in 5 counties Southeast Oklahoma and will sell ½ royalty for $1.00 per acre or will lease 10 years paid up for $1.00 per acre. Closing an estate. Good title.
LUTHER CALAHAN,
Idabel, Oklahoma.

WE OFFER 1¼ royalty acres Fletcher Smith 80 acre tract, Van Pool, 10 wells, price $3,750 for this interest, earnings averaging $45 month for the last year period. E. T. Marion Real Estate Co., 407 Southwestern Life Insurance Bldg., Dallas, Texas.

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THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

Royalties—Production

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20 BROAD ST. NEW YORK

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H. P. BOWEN
842 Kennedy Bldg., Tulsa, Okla.

HIGH GRADE producing oil and gas royalties offered to dealers. Billie Smallwood. P. O. Box 2261, Tulsa, Okla.

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Petroleum Bldg., Oklahoma City, Okla.

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ROYALTIES producing and nonproducing in Kansas, Oklahoma and Texas. James R. Haynes, Grantville, Kansas.

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Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. Complete set of Forms and Reports for filing with Securities and Exchange Commission accompanies every order. Inquiries Invited.
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Dallas, Texas.

LAND in Fee, All royalty close in. 10 Acres up. Near new locations. Owner, Geo. W. Seckman, Edmond, Okla.

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160 A. oil and gas lease located in SE4, Sec. 6-2s-30e, Roosevelt County, New Mex. Price $4.00 per acre, 50c rentals, 10-year lease. Near drilling well in Sec. 21-2s-30e. Write me. Thos. E. Boyd, Elida, N. M.

NEW OIL WELLS and new locations is putting the old time feeling back in this part of the Texas panhandle. I am giving my clients, new and old, the same dependable help that I have given them for the past thirty years in this place in Oil land and other investments.
E. B. REEVES
(Investments)
Alanreed, Gray County, Texas.

I OWN some of the best royalties in the Van and East Texas Fields. Will sell in any amount on five days' draft anywhere. Challenge any customer of mine to sell me back royalty bought from me at any time for price paid to me. Reports made to the Federal Government on each piece. Will buy royalties and oil payments in Texas and Oklahoma. P. R. Knickerbocker, 3237 Westminster St., Dallas, Texas.

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W. R. Brown & Co., Inc.
14 Prospect St., East Orange, N. J.

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105 West Adams Street
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Dealers in Oil Royalties since 1918.

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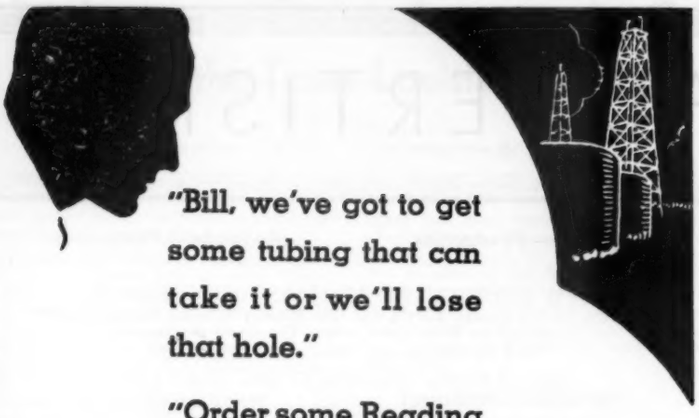
THE OIL AND GAS JOURNAL
Tulsa, Oklahoma



"Bill, we've got to get some tubing that can take it or we'll lose that hole."

"Order some Reading Genuine Puddled Wrought Iron Tubing, then, Jim. That's 'hot spot' stuff."

For help on tubular problems, write

READING IRON COMPANY
PHILADELPHIA

SCIENCE AND INVENTION HAVE NEVER FOUND A SATISFACTORY SUBSTITUTE FOR GENUINE PUDDLED WROUGHT IRON

Fulton Duplex Sensitive Gas Governor

The Utmost Delicacy of REGULATION

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A HIGH and variable inlet pressure can be reduced to a low and unvarying outlet pressure by the specially designed and precisely made Fulton Duplex Sensitive Gas Governor. A mixture of natural and manufactured gas can be controlled with extreme accuracy and with perfect assurance. Frictional surfaces reduced to a minimum, diaphragm area extraordinarily enlarged, and non-corroding materials scientifically adapted to their use, account largely for the success of this dependable Governor. Extremely simple. Easily and quickly installed. No accessories to give trouble. Ask for full description.

The Chaplin-Fulton Manufacturing Co.
28-40 Penn Avenue **Pittsburgh, Pa.**

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